Vol 7 No 3

The Australian COMMODORE and AMIGA REVIEW

March $3.50*

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Ami Expo Cologne report

Partner 64 - pop up help

Australian Developers - who are they?● Pirates - watch out!

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The Australian COMMODORE and Amiga Review

VOL. 7 NO. 3 March 1990

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Editorial

Requests from C64 owners to continue support for their machine continue to flood in. Yes, we do read the mail.

Our faithful C128er, Eric Holroyd, continues to submit editorial on C64 disks - others too file the occasional programming article, for which we are thankful. However, the majority of our writers have gone Amiga.

I would very much like to hear from C64/C128 people interested in writing a regular column in the *Australian Commodore and Amiga Review*.

Please contact me directly - do not post a message on any BBS or Viatel system hoping it may reach me. Although all such messages do eventually get read, we need to hear from you quickly.

We would especially like a regular GEOS columnist prepared to submit ASCII files. "How To" artices on products which require many hours experience to get the most out of would also be appreciated. For further details call (02) 817 0011.

Editorial balance in our magazine is always a constant issue. We want you to have your say too. Inside this issue is a reader survey designed to tell us what you want. This information will also help us build a picture of who our readers are. (Some people think that only teenagers read computer magazines - we all know better, but let's see the proof).

As an added incentive to writing in, four reader survey forms will be randomly extracted from the resulting pile. These enthusiastic Commodorians will receive for their efforts a free one year subscription. Of course, as usual, we encourage you all to subscribe - did you realise it's actually much cheaper?

Starting this issue, a number of pages have been produced using the Commodore Amiga.

Over the next few months, we plan to desktop publish more and more of the magazine on the Amiga, including additional colour piccies of the programs we write about. Next issue we are also launching new columns on Desktop Video, Desktop Publishing and AmigaBASIC. ❑

Andrew Farrell

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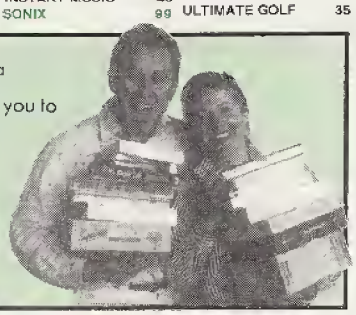

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C64ers

Word Writer 4

A preview by Eric Holroyd

● Hold the front page! Here's a very quick last minute rundown on the word processing part of the *TimeWorks* suite reviewed in our February issue.

It's a two disk set with lots and lots of goodies. Choose from eight built-in fonts in 13 sizes (9 - 72 point) in bold, italic or underlined. Use any font in sub or superscript and with or without serifs. If that's not enough you can use GEOS fonts too!

There's over 90 special mini graphics (pointing hand, Smiley face, lips etc) to mix and match with fonts. Preview it all in proper 80 column format, then print it Font Printout Mode for sharp, premium quality paperwork. Use High Speed mode for draft printing and proof reading. Macros are supported and easy to set up and there's a new feature called "Bookmark" which lets you put a special placemarker in your text.

Full word wrap formats the text continuously as you write and and moving around the screen is fast too. An integrated "Outline Processor" lets you organise your notes for speeches and reports etc, and there's an 85,000 word spell checker and an expandable "personal dictionary". Over 60,000 synonyms and alternatives are included in the Thesaurus to make sure you're never stuck for words and the spell checker does a word count for you too.

All the usual WP goodies are there: Move & Copy; Search & Replace; Insert & Overstrike Modes; Multiple Deletes etc. Import files from other popular WPs, plus direct export to GEOS.

Save files in ASCII or PET-ASCII for modem use etc. Built-in HELP screens plus included keyboard overlays are great, as is the fully spiral bound manual with its "Quick Start Tutorials" designed to get you working confidently in less than an hour.

In the short time I've had this I've found it to be a very high quality easy to use program, the likes of which I never thought I'd see on the C-64.

RRP $59.95.

Review copy by courtesy of Dataflow (02) 331-6153. ❑

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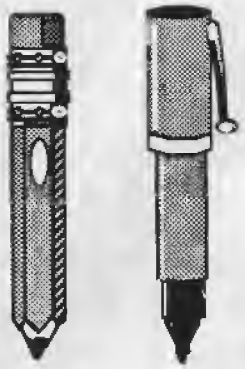

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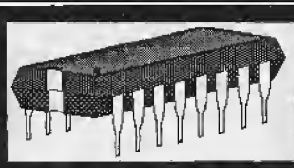

Commodore in the media

● Response to our request for sightings of Commodore computers in the media has been excellent. This month the free subscription goes to Mark Vine, who spotted possibly the worst and the best possible example of free publicity for Commodore computers.

● The good one - Mark writes:- "Viewers of the ABC/BBC television spy drama *Game Set and Match* may have noticed in the first episode (put to air in late December) our hero, Bernard Sampson, was ushered into the MI5 records vault to search the computer for possible double agents. He was handed a 3.5 inch disk, which was then inserted into an Amiga 2000. *Superbase Professional* was then seen to produce a series of screens containing personnel data and a digitised photograph of each suspect."

● And the bad one . . . The Association of Certified Public Accountants recently ran a series of television commercials in Sydney to convince people to go only to qualified CPA's. The ad showed a client storming into a grotty office where an unqualified accountant quickly turned off his Amiga 1000!

Mark Vine comments: "Bad vibes, you blokes! People with brains use Amigas. IBM's are for the sheep!" Well put, Mark. Your subscription starts this issue.

● Just about everyone wrote in about a Christian Television Foundation advertisement which featured an Amiga 2000 in a side view shot, and then moved on to a number of animations also produced on the Amiga - flowers growing, musical beats flying around the screen and more . . . the only hitch was that the name of the computer and monitor were covered with masking tape. Shame! Does anyone know who produced this advertisement and which program they used to achieve the animation?

● Martyn Williams of Warilla reports an Amiga 1000 appears in the movie *Betrayed* where it is used to access the white supremist BBS and is seen in several scenes.

● Closer to home, on the Network Ten series, *The Henderson Kids II*, Friday seven o'clock, the Amiga 1000 is often used by character Steve Henderson. Patrick Lagana reports one show where the Hendersons were hosting a party, and Steve was in the living room using the Amiga's music capabilities. He boasts that the Amiga can play 16 instruments at one time! The Amiga comes into view on numerous other occasions. Thank you, Patrick from Auburn, for that info.

● Other spottings include *Days of Our Lives*, where the Commodore C64 and 1541 drive was seen in an airport terminal booking office. Stephen Walsh supplied us that sighting from Ballarat.

● On to a more complex application - and one that we have heard recently the Amiga is actually being partially put to - in the movie on video called *Deep Star Six*, the Amiga 1084 monitor appears. The computer was being used to do a brain scan according to devout Amigoid Robert Carter of Wheelers Hill. (Robert was explaining just how popular the Amiga was to a cynical friend as they watched the movie, when - you guessed it, there it was right before their eyes.)

More media moments with the Amiga and C64 next month. In the mean time, keep those sightings rolling in.

USA Commodore market troubles

● The festive season was not all champagne and caviar for Commodore

Update

Howdy Pardner - the reason for my cowboy greeting is because of one of our fabulous new 1990 games that has just been released called WEST PHASER, a game so addictive that I have been neglecting all my other work (see our Advertisement). As you may have already noticed, we have a four page fold out advertisement with just some of our "SUPER" new games for the 90's. As you will see in the advertisement, these new games are suitible for your Amiga, but not for your C-64 or PC, so please check carefully before you go to your retailer.

Parents! We are very pleased to inform you that we have recently added 8 new titles to our Amiga educational list. For children of ages 6-12, we have the new "DISCOVER" series: CHEMISTRY, MATHS, NUMBERS and ALPHABET. We also have SPELLBOOK; THINGS TO DO WITH WORDS and THINGS TO DO WITH NUMBERS. We are proud to announce that we can offer you DINOSAURS ARE FOREVER, OPPOSITES ATTRACT, SPACE MATHS and BIRDS "N" BEES for the Amiga.

We have heard from a lot of Amiga owners that the Commodore mouse does not last very long, so we have found for you, a long-life mouse called the M-4. Of course, we are also known for our C-64 mice, the M-4 and NEOS mice, both of which we can supply with GEOS driver. And of course, the best mouse for the IBM PC, the GFM-301 or if your budget is tight, the excellent value GM6X mouse. Last but not least, we have 2 new disk boxes for you, the BANX which is an 80 x 3.5" really beautiful disk box which is the slide out drawer variety and comes complete with clips for horizontal or verticle stacking. The other box is a 20 x 3.5" disk box which looks very much like a video box, but is cunningly made to open in such a way that your disks are readily pickoutable! ❑

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marketing in the United States. Rumour has it that the advertising campaign, originally budgeted at $14 million, had to be halved when several major chain stores opted out of carrying Amiga products.

The biggest battle looming on the horizon in the USA is between Nintendo and Commodore. At the moment, the action is going in Nintendo's favour. However, Commodore is going from strength to strength in the graphics and video arena.

And in Europe and Australia, the Amiga rules supreme. So, don't worry about a thing - just wonder - will Commodore have to build a low end A500 to compete with Nintendo? Will the existing model be marked down, or will they come up with a new machine? Who knows? One thing for sure - the C64 is still more expensive than a Nintendo - so the Amiga is a long way off yet. Some experts believe the Nintendo will spawn a new group of bored games players that could yet spark another growth for the more interesting home computers with keyboards.

Pyramid selling plan for Commodore Review?

● After a long meeting with various User Group Presidents and big time pirate groups, the publishers of *Australian Commodore and Amiga Review* have decided not to proceed with a pyramid selling plan for increasing sales of the magazine you are now reading.

However, we still stick by the old saying - SUBSCRIBE TODAY and be sure to get your personal copy.

As an added bonus this month only - two new subscribers will be allowed to choose any three Amiga or Commodore 64 public domain disks from our PD/disk magazine collection (at least $18 value). All you have to do is include a short paragraph on why our magazine is better than the rest with your subscription form. Watch April Ram Rumbles for the winner! All entries on standard size paper. No flashing ink will be accepted.❑

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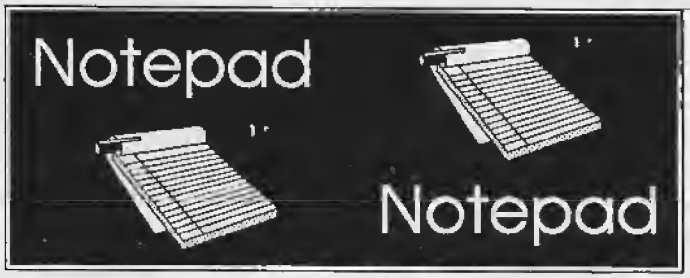

A2500 and AMAX hassles

● Reports of over-heating problems with A2500's kitted out with the AT bridgeboard have filtered through over past weeks. Anyone else having the same problem? AMAX users are finding the new Agnus chip can cause problems when used with the Flicker Fixer board although a full ECS fixes the problem. Anybody shed light on this one?

Oxxi buys Aegis

● **Supplies of software from software giant Aegis have been in doubt for the past three months. However, now that Oxxi has bought the entire product line the future of titles such as Aegis *Videoscape 3D* and *Diga!* are looking more certain. Intouch Tutorials are the local distributor for Oxxi products, and will therefore be handling Aegis goodies too. (They recently promised us *Videoscape 2.0* and Transcript for review... let's hope they arrive soon!)**

New Products

Desktop video book

● *Desktop video on the Amiga is the hottest topic today and over the past two years people have asked Abacus for a desktop video book.*

Amiga Desktop Video Guide is the first practical book to show how to set up a complete desktop video production system for the home or office. Amiga Desktop Video Guide, written by Guy Wright, covers all the basics - defining video terms, selecting genlocks, digitisers, scanners, VCR's, cameras and hooking them to the Amiga. It shows you how to use many of the popular software packages for creating and enhancing video titling, animation, 3D and special effects, music and more. There are three "recommended" video studios for the hobbyist, the amateur and the professional video producer and a complete step-by-step tutorial for producing the videos. Stocks should be arriving in Australia in the next month or two.

68030 Board

● One of the distinguishing features of the A2000 family of Amigas is that they can be readily upgraded with more powerful members of the Motorola MC68000 CPU family. The new A2630-2 Accelerator Card is the latest upgrade product. It will give any A2000 the power of the 25MHz Motorola 68030. The 68030 increases performance by reading and writing data in 32-bit chunks, rather than 16-bit chunks. The 25MHz clock speed makes it nearly four times as fast as the 68000 CPU too. It has an on-chip cache to speed up performance, even with slower memory systems. And it eliminates the need for a 68851 Memory Management Unit because it performs these functions directly on chip. For even faster performance, the A2630-2 can use a Motorola 68881 or 68882 Floating Point Unit for math calculations.

The A2630-2 card plugs into the coprocessor slot of any A2000 computer. On it is the 68030 CPU and a 68882 Floating Point Unit, for speeding up mathematical calculations.

To complement the 32-bit Motorola chips, the card has from 2M to 4M of 32-bit onboard memory, running at the speed of 68030. The result is an acceleration in performance for most integer based operations of from 400% to 600%. The card comes with 64K of ROM, expandable to 128K. This can be used for diagnostics, boot-up options and some initialisations used by alternate software configurations. Suggested retail price is $3360.00 from Commodore Computers.

Vapourware Award The Advantage/Gold Disk

● **Still no sign of this baby, advertised many months ago. Gold Disk have missed every supposed release date so far, and we are beginning to wonder whether it was really close to being finished when the first ads appeared six months ago! The days of vapourware Amiga products should be long gone by now, guys, and from Gold Disk we expect better.**

Desktop Budget/Gold Disk

● *An icon driven personal finance program. Handles monthly payments, year end roll-over, and month-end reconciliations. Detailed transactions of accounts. Includes a desktop calculator and icon- designer for adding new categories. RRP $59.95. Local distributor: Intouch Tutorials (02) 954 3735.* ❑

Special report from the AmiEXPO Cologne

● ONE OF THE biggest Amiga events in Europe last year was AmiEXPO in Cologne, Germany. The actual exposition took place in hall 6 of the Cologne Convention Centre. Along with the exposition, a number of courses and discussions on various topics like C-programming, graphics and video (in the master-classes); further Amiga BASIC, Office Applications, CLI, Software Piracy, How to Publish Software, Hardware ongoing, Music, Public Domain (public discussions) took place in separate rooms.

Also open for the public was the Amiga Video Theatre. This show consisted of a collection of non-commercial videos done using Amigas. Not all of these were of extraordinary quality. However something called 'Wild Wild West' was very impressive and showed smooth raytracing animation.

Another event (reserved for dealers) was the Commodore presentation. I was let in because it was impossible to enter the exposition and so they had opened all other events (including the expensive master-classes) for everyone and free. Amiga-DTV was the topic of this presentation.

Dealers were informed what a user can do with the Amiga and what hard/software he needs for it. An Amiga 2500 was used to illustrate. As a part of this presentation, a professional video (raytracing and other effects) done using the Amiga by 'Studio 5' was showed. Words can't tell. You must have seen it. They said it's available now on video tape.

A separate meeting for dealers and the papers organised by DTM, Microtron, Print Technik and Videocomp took place in a hotel. I was invited by a Swiss distributor. GVP and Hydra Systems were there. When I looked in, the Amiga Ethernet Board by Hydra Systems was being presented. (More about that one later)

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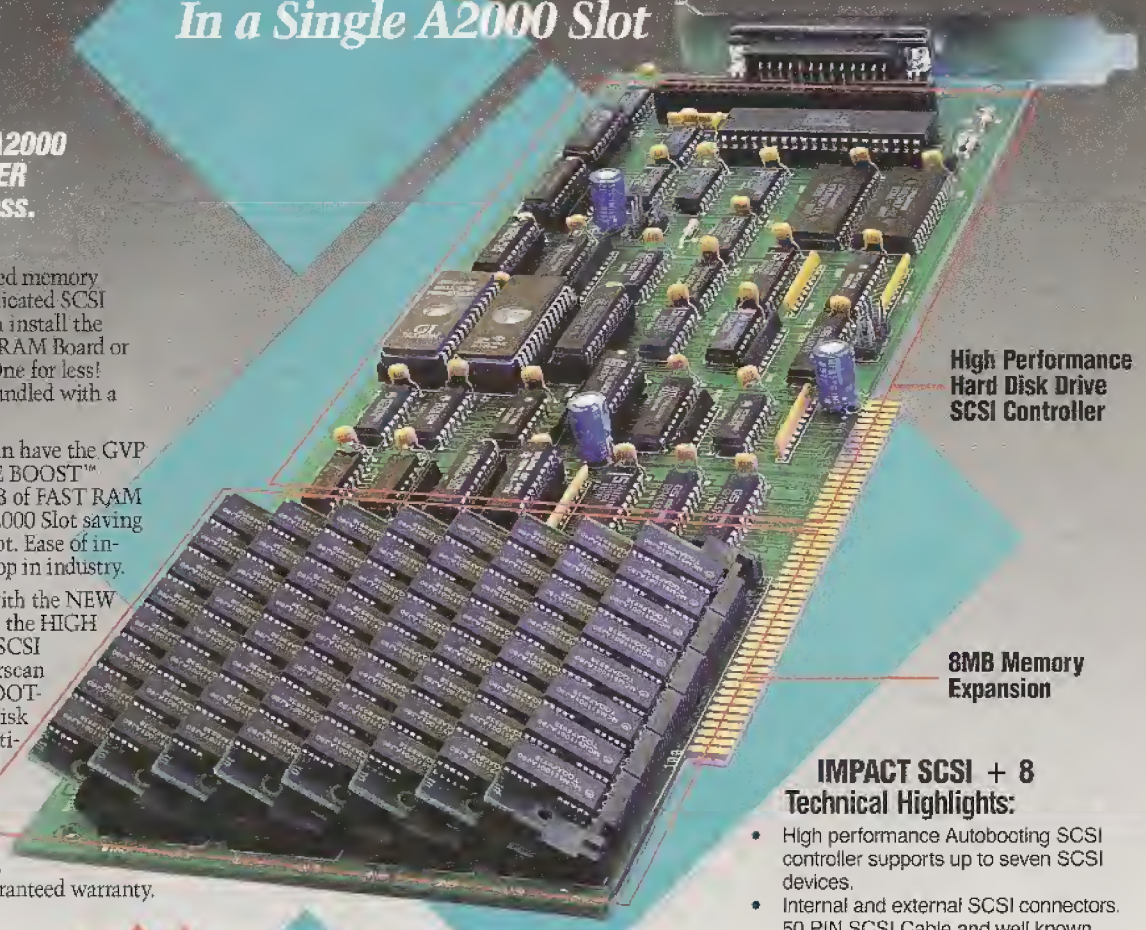

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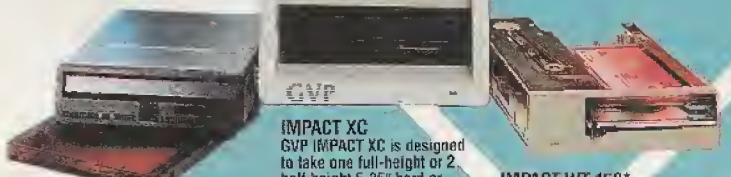

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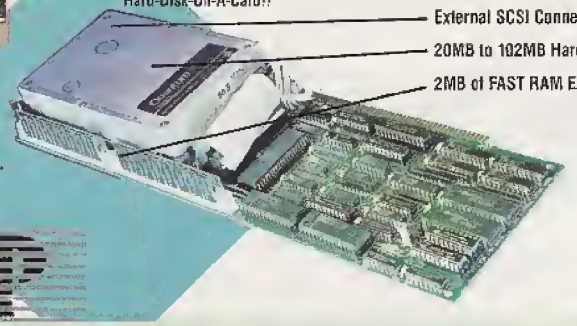

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Now for the exposition itself

● When I came to hall 6 half an hour after opening, the place was filled with several hundred people. Half of them were queuing for tickets, the others at the entrance. It was useless. Late in the afternoon it was a bit better. But inside it was almost impossible to move. As it seemed, nobody was prepared for such a large amount of visitors. I hope that this fact will cause more dealers, papers and professional users to go for the Amiga. Nobody can pretend that there is no market or no hard/software.

And these were the highlights of the exposition: The most important expositors were: *Amiga-* magazine, Commodore, Compustore (Microbotics), Digital Animation Products, DTM, IM, Kupke, NewTek, X-Pert. For many software companies, it was a pure sale event. Almost everyone had special offers, you could buy things for 50 to 80 % of the normal price. Many products were completely sold out. Except for at Gigatron and Kupke, all important new hardware came from the USA. Many developers from USA had come and it was very interesting to speak to them. For example Allan Hastings answered every question about Raytracing. And as a special attraction, Jay Miner was giving signatures. I saw people bringing keyboards and parts of their Amiga 1000 to him.

The most interesting hardware news included:

● **SANG Computer:** MegaLink 02: This is the first Transputer board with an onboard Video system. The basic version consists of a board with one T800, 1MB CPU RAM, video system using Inmos G300 Colour Video Controller, 1MB video RAM and an interface board which links to the Amiga. It makes use of extra pins on PC slots! At last, a reasonable use for PC slots! Whether Helios is available now, I asked but was told that this is not an important point since the current versions of Helios don't do much more than crash. One sole T800 (20MHz) has 10 MIPS and is 3-5 times as fast as a 68030-20. But you can install more T800. At the booth of Digital Animation Products they showed a Tower Amiga with 5 T800. They did some rendering and Mandelbrot sets. They also showed the graphics capabilities of the board: In the basic version you can already use 24 bitplanes (16M colours) in a 640 x 480 resolution. There are other modes, like a 256 out of 16M colours mode with colourmapping, and - very important for video applications - standard PAL/NTSC interlaced video.

A parallel C compiler which runs with or without (as they assured me) Helios is available now and has been used by them to make the demos they showed. The most important software packages like *Sculpt 4D, PixMate, PhotonPaint* were claimed to be available now, adapted!!! Since they were not shown, I fancy that the user interface takes place on the Amiga side. Price: DM 7000.- for the basic version.

● **Gigatron:** Gigatron currently is the most innovative hardware company in Germany. They offer (among others) the following things: Memory Expansions for A500 (MiniMax 1.8Mb) and Amiga 2000; Multi-Function board including memory, A/D- and D/A converter, parallel I/O, HD-controller; internal(!) hard disk for A500 (2.5" hard drive

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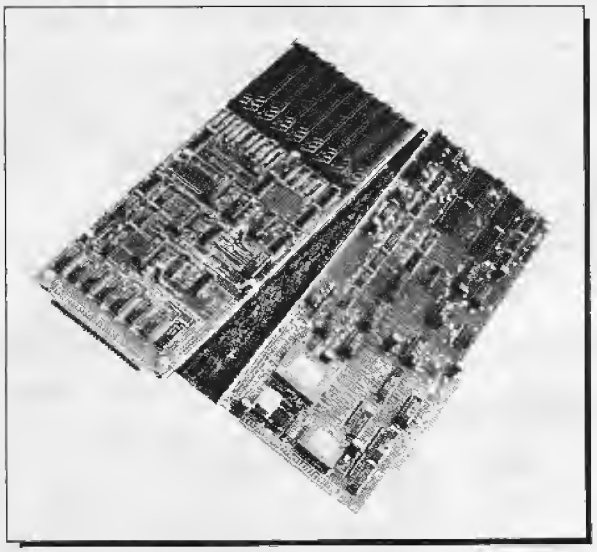

GVP 8Mb card / GVP 68030 - 40 MHz board

with 20, 40 or 100 MB and 450 Kb/sec, but non-SCSI ... why????); new motherboard for A500 with 68020 and internal hard disk.

Unfortunately, the most sensational hit was not ready to be shown. It's a laptop Amiga! As I was told by the developers, it will be introduced and ready for sale at CeBIT '90 in March. The laptop Amiga contains a completely new developed motherboard which integrates a complete Amiga on a 8 layer 'Europakarte'. It has 3 internal non-zorro slots for things like a modem-, 68020-, tranputer- and messydos cards. It can have an internal 2.5" hard disk. As a display, you can have either a LCD or a plasma display, both with a resolution of 640x480. The LCD version uses a 16-grey scale. Because it uses the RGB output as source, Sprites and all Amiga graphics modes work ok. You can work either in NTSC mode or in PAL mode, where 32 lines are cut off. The keyboard has an integrated trackball as a mouse. The system is said to run 8 hours using one single accu pac. Its chip memory is claimed to be expandable to 2Mb! The proud developers said Commodore did at first not believe them when they asked for a meeting to show a pre-version. They said nobody but themself can design an entire Amiga main board. The price will be somewhere between DM 5000.- and DM 7000.

● **X-Pert:** X-Pert was showing the fastest personal computer of the world. It's a tower Amiga system with a GVP 68030 - 40MHz board. You can have an additional 4 or 8 Mb card. The 40MHz Amiga is about 17 times faster than a normal and faster than all '486 . Also to see at X-Pert's: A 1.2 Gb optical removable disk, a 12MHz - A 2286 AT card, SCSI hard disks and a Framebuffer with 16M colours.

● **Newtek:** At NewTek's it was the Video Toaster that provided action. It's a video effect board for the Amiga 2000 with realtime high quality colour video digitiser. It works with 16777216 colours and is able to change video images in realtime. For example, it can shift around (in front of the video picture coming from the camera) 10 'windows', one in front of the other, each of which shows a (moving) part of the entire picture, can then turn these windows, mirror or reduce them. The effects are programmable, so it's always possible to implement new ones or even to write own software for it. Furthermore, the Video Toaster can be used as a Digitiser (the memory can be transferred to and from the Amiga), Genlock or Framebuffer. At the moment there's just an NTSC version. (costs US $ 1599.-) A PAL version will be available in about 9 months. It is going to be a more expensive because of the more complex PAL standard, as I was told.

Also at NewTek's you could speak to Allan Hastings who was showing a demo video made using his new Rendering software. He is still working on it and it's going to include reflection mapping.

● **Hydra Systems:** Hydra Systems has made the first Ethernet board for the Amiga. Using it, you can build an Amiga Network with a central File Server, or you can put the Amiga into a UNIX network. The board has a DMA which it can use to transfer data very fast and without stealing any CPU power. They showed (at a separate closed meeting, maybe also at the exposition (?)) two Amigas, one of which had access via the network to all file devices of the other. Data transfer is claimed to be 'faster than with an A 2090 w/ ST-506 harddisk'. Also a chat mode and remote CLI was demonstrated.

● **Commodore:** Commodore had nothing new to show. Overall a bit disappointing. To mention progress compared to earlier Commodore booths (in Europe) I can say that the 'design' was very professionally done and thanks to the well-chosen large texts high over each corner you could easily find what you were looking for, and know what was being shown even if the many people completely blocked your view to the screen.

Overall, it was - in spite of the bad organisation - a really great event. There was something for everyone. And you could see a lot of interesting people there. Definitely worth the effort to go there (took me one day to travel by train...) Let's hope that next year in Cologne, there will be at least 3 halls! F.B. (USERNET) ❑

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Letters

TO THE EDITOR

Kindwords complaints

● *Kindwords*, that great new WP that everyone loves, is pathetic. I have two copies of it, one in a package called "Publishers' Choice", and the other with the A500 Starter Kit, and they are both just as bad as each other. Sure its got heaps of good things about it, such as 100,000 word spelling checker, and thesaurus, colour graphics importing, cropping, sizing and editing and different font styles. But it just doesn't work on more than 20 pages.

On screen everything is fine (except for the numerous software failures that always seem to happen just when you're about to save another couple of pages of your document) but when you print out it is a different story. The bottom line of every page is repeated on the top of the next page on documents more than about 20 pages long.

Also only on long documents the format markers in the headers and footers are printed. I have tried everything, but I just can't work out why it is doing these things. I would appreciate any help you have to offer on these problems, and would also like to see more complaints in this section of the magazine, so that software buyers can evaluate the pro's and con's of the software they are buying.

Software is so expensive these days that people need all the help they can get in choosing software.

The only worthwhile outlet that I have found in Melbourne is MEI Computers in Ferntree Gully. It's a small shop, with service that makes other places seem like cemeteries. Ian of MEI spent hours with us one day, and was the best help you are likely to find.

On page 56 of the November issue was a letter asking for ratings on reviews giving graphics, sound, playability and value for money. It's a great idea. In reply you said that it would be difficult to keep some level of consistency. Why not have wargamers evaluating wargames, simulatorers evaluating simulators etc, evaluating it as the sort of program it is, by people who always play that sort of program. It still wouldn't give you a perfect consistency, but the public can make up their own minds after reading the review and the ratings. I hope you don't mind the plug and I hope this letter isn't too long for you to print.

A Edgington
Mitcham VIC

Ed: Well, you just snuck in! Any other Kindwords users out there want to add their 35¢ worth?

A590 Excellence! glitch

● I am typing this letter on my "second favourite" word processor. Till now I have always preferred to use *Excellence!* I recently added an A590, with the 2meg of ram installed, to my Amiga 500. Whilst I have managed to get many programs, which don't have a Hard Disk Install utility, successfully installed on my A590, *Excellence!* is proving to be a real problem.

To begin with, double clicking th HD Install icon did not work at all. I eventually managed to run this file through the Amiga Shell. All seemed to work okay, the files were copied, the *Excellence!* drawer created and the startup sequence modified. I can even load *Excelence!* The problem is that if I try to open a file from the project menu, I'm sent crashing to the Guru. The same goes when I try to save a file. The only way to load a file is by double clicking its icon to open *Excellence!* and load the file concurrently; this is not much use when I cannot save it after modification.

If I boot my system with the floppies, and have the *Excellence!* disk in DF1: I get the same problem. In fact, the only way I can run *Excellence!* is by completely disconecting the A590 from my sytem.

P Craven
Weipa QLD

Ed: Yes, the A590 is at fault! You must reformat using the standard file system - not FFS! (Hardly seeems worth it.) We have heard a new version of Excellence! is nearly out - this may fix your problem.

C64 programs to Amiga

● I have recently updated from a Commodore 64 to an Amiga 500 and have some questions to ask about the two:

● I am wondering how do you transfer programs using the RS232-C parallel cable between the two computers? Can games that take more than one file or even two or three disks be ported over? Is an interface required for an RS 232 to fit my Commodore 64 and how much would it cost? Is this a high cost or a low cost solution or would it be better to use an emulator? Is there a special program on either or both computers that are needed for the transfer?

● I have also noticed a program on my EXTRAS 1.3 disk called PC utilities which, using a 5.25 inch disk drive, can transfer files from PC format to AMIGADOS format. Does this work with MS-DOS 3.2 files including EGA 16 colour graphics and programs which take more than one disk? Also is there anyway of transferring 3.5 inch PC programs in a similar way or should I just go out and buy a 5.25 inch disk drive?

M Cowan
Shortland NSW

Ed: There is no point transferring programs, as they will not run on the Amiga. It may be possible to convert C64 BASIC programs to the Amiga - but this would be something only an experienced BASIC programmer of both machines could attempt.

However, data files such as ASCII output from a wordprocessor may be transfered via an RS-232 cable. An interface will cost around $90.00. The cable shouldbe 2-3, 3-2 and 20-20. The C64 Emulator II would be less hassle. It is around $130 and can be used to read files directly off a 1541 drive using the interface included.

In answer to your second question, yes you could transfer any format file. Graphic files will need conversion - utilities to do that exist in the Fred Fish PD collection. Programs, once again, will not run.

The multidisk situation in both instances is irrelevant. You simply send the files on each disk.

3.25 disk PC files can be read in a similar way - you will ned a patch for the PC-Utils program - which only works on a genuine Commodore 5.25 drive.

Most of the third party drives will not work.

1541 parallel cable problems

● I recently purchased a parallel cable for my C64/1541 to enable me to use the super nibbler on Double Image II. After connecting the cable up it was found that the program would not work. I have now found out that Commodore made a change to the PCB on my model of 1541 and that no parallel type system, eg Dolphin Dos, will work with this model of disk drive.

I have been told that the PCB is configured differently and I am asking if any readers know of a modification that can be done to enable the parallel cable to work. I would appreciate a reply.

It seems to be extremely difficult to get a copy of the *Commodore Review* nowadays. This was a problem even in Sydney. How about some more C64 articles?

G.M. Fisher, 36 Adam Drive Brinsmead Glen, Cairns, 4870

Ed: Please write to us or direct to Mr Fisher about the cable..

We are printing more magazines every month - but demand is still outstripping supply! Hopefully it will catch up soon.

Will we ever see the 1581?

Are the 1581 disk drives available in Australia? In Vol 5 No 7, Ram Rumbles,it was stated that these were available from Computer Discounts of St Leonards.

Yet in Vol 5 No 8 you answered a letter with the remark that the 1581 was not available in Australia, mainly due to the power supply.

If the power supply is the real reason then it is interesting to note that the 1581 is readily available in the UK which also has 240V 50Hz power supply.

Surely some distributor in Australia will bite the bullet and import the 1581 drive as there appears to be a lot of interest in this drive and hence a good market.

I am thinking of buying a printer and thought of purchasing a Super Graphics Senior Interface and a Star NX 1000 centronics printer. Would you recommend this combination for general word processing and some graphics use? Note centronics printer to allow future update for my 64.

G M Fisher Cairns QLD

Ed: The answer is yes it was, no - not from Commodore , yes the power supply was the reason they gave us. The power supply is still a problem if you can get one - but some have tracked down reliable alternatives. H.P.D. may bring in the 1581, and so may Commodore - we have been encouraging them. - Good choice of interface.

Faster C64 BASIC

● I wish I had read the article on BASIC speed, by David Williams (Jan) 90), a few years ago, but it has been a big help. And I hope other readers can add to it. I went to the trouble of buying a compiler when part of the slowness was due to ignoring those fundamentals of BASIC.

As a first addition to the info, if you look at the attached program, you will see that it takes David's example of a SIN table, and developers it much more quickly, mainly because it uses only the SIN function 90 times instead of 360, and it adds a COS table, all in 11 seconds, instead of 16 for the SIN table alone.

What would be really interesting, would be a means of saving the tables, instead of having to write the program into my graphics programs. Easy enough to save them, but perhaps difficult to load and use them from BASIC, particularly if they are floating point. Which brings up another suggestion. Perhaps someone can write an article on how the computer does floating point calculations.

```
10 DIM S(360), C(360)
20 REM S=SIN(DEGREES), C=COS
(DEGEES)
30 PI=π : TI $="000000" ; Y=PI/180
40 FOR X=0TO360 : SX=SIN (Y*X) :
NEXT
50 PRINTTI$: TI$="000000"
60 FOR X=0TO90 : S(X)=SIN (Y*X) :
NEXT
70 FORX=0TO90: C(X)=S(90-X)
:NEXT
80 FORX=0TO90
90 S(X+90)=C(X) : C(X+90)=-S(X)
100 S(X+180)=-S(X) : C(X+180)=-C(X)
110 S(X+270)=-C(X) : C(X+270)=S(X)
120 NEXT:PRINTTI$
130 END
```

Ed: Thanks for the ideas~ We will give David a prod and see what he can come up with. ❑

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Cockroach Turbo Rom	$42.50 inc postage
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AMIGA, PC, C-64

PSYCHO

Mother is cranky and Norman is off his rocker! The Bate's Motel is hanging out the "Welcome" sign again. Missing jewels and a trail of twisted psychotic murders lead you inevitably to Norman's doorstep. "Come in, come in, the motel's a bit rundown, and we don't get a lot of visitors nowadays. Mother and I are certain you'll enjoy your stay with us — FOREVER!" ***AMIGA, PC***

NIGHTMARE ON ELM STREET

And you thought moving into a new neighbourhood would give you a fresh start; new friends, new house, new neighbours. You only made one mistake, you moved into ELM STREET, Freddie's street. One by one, you watch your new friends consumed by Freddie's dreamtime madness. Now it's your turn. You sleep, and let the nightmare envelope you, dragging you into the endless twilight of Freddie's world. Once there, you move quickly, driven by something between fear and desperation, frantic to rescue your friends and vanquish Freddy! Can Freddy finally be killed? Use your dreampower to find out!

P.S. I forgot to tell you, the rules keep changing 'cause Freddy cheats!

PC, C-64

YOUR FAVOURITE FILM AND COMIC CHARACTERS ARE HERE

MIAMI VICE This is crime fighting, Miami-style. Join Crockett and Tubbs, forget the socks and grab the Ray-Bans. **PC**

SEARCH FOR THE TITANIC The most infamous shipwreck in history is lying out there somewhere. Fit out your mission and then sail in SEARCH FOR THE TITANIC. **C-64, PC**

CHASE ON TOM SAWYERS ISLAND Injun Joe's after you, Aunt Polly's after you, is there no rest for Tom? **C-64, PC**

GARFIELD'S WINTER TALE Garfield sets off in search of the CHICKEN THAT LAYS THE CHOCOLATE EGG. Or is this just a calorie-laden dream. **AMIGA, C-64**

WHEEL OF FORTUNE The world famous TV Game show brilliantly presented with all the fun and action of the original. **C-64**

ALL NEW FAMILY FEUD Just like the TV original, questions and answers, cheers and teams. Score the most points and go for the bonus round. **C-64, PC**

SNOOPY "Sherlock" Snoopy is on the case in search of the missing security blanket. **AMIGA**

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ARCADE STYLE GAMES AS YOU'VE NEVER SEEN THEM!!

STORMLORD

It used to be nice here. The land was green, flowers bloomed, birds sang, all under the STORMLORD's watchful eye, and under the calming gaze of the faeries. Now, strange hideous creatures fill the land; never dead skeletons, gargoyles and menacing wizards block your path in the quest to liberate the captured faeries, and restore calm to the realm of the Stormlord.

Set against brilliant backdrops and with amazing sound effects, STORMLORD combines puzzles with strategic elements in a stunning arcade masterpiece. ***AMIGA, C-64***

ONSLAUGHT

When your back is to the wall, there's only one way out. Onslaught casts you in the role of the barbarous leader of your tribe and defender of your lands. You're surrounded on all sides by other tribes from other sects, all hungry for both your blood and your lands. The only means of defense available is attack. Crash and slash your way across enemy territory, but always be careful to balance territorial expansion and securing your home lands. Hundreds of enemy troops occupy each land, with literally scores of lands to conquer. This is going to be a long war!! ***AMIGA***

DARIUS

DARIUS has a fanatical following in the arcades, but now Pactronics are pleased to release DARIUS +, a specially enhanced version with more levels, more weapons and many more aliens. Starting in an underwater setting, you must blast your way through each of twenty eight sectors. There are bonuses to collect, shields and weapons to pick up, and you're going to need them! At the end of each level, just when you thought you were through the worst of it, you're face to face with some of the biggest, meanest motherships you've ever seen.

Get out there and blast the mothers!
AMIGA

OOZE Brilliant graphics, and a great plot, the advenure of your after-life.

HYPERDROME This is the culmination of five years training. Pass this test and you're a fully fledged pilot. Fail — and you're fired (or is that fried?)! **AMIGA**

FOUNDATION WASTE The "WASTE" a futuristic no-mans-land. It was easy getting in, but . . . . **AMIGA**

SLAYER No scenario, no plot, just wicket, non-stop shoot-em up action. **AMIGA**

SPACE CONQUEST You've been ordered to oversee and protect the settlement of nine new planets in a far-flung corner of the galaxy. All you have to do is beat the Mancers to them. **AMIGA**

SCI-FI ARCADE STYLE

SPACE RACER In the future there are no wars. Only the SPACE RACES. **AMIGA**

ALIEN SYNDROME Flame throwers, lasers, fireballs, burnt aliens; not a pretty job, but someone's gotta do it. **C-64 (DFT)**

STEEL Eradicate rogue robots from a wrecked rocketship. **AMIGA**

PIONEER PLAGUE The worlds first HAM mode game, it's a huge interstellar seek-and-destroy mission. **AMIGA**

SOLDIER OF LIGHT You are the Soldier of Light. Three worlds await you, conquer or be conquered! **AMIGA, C-64**

G.NIUS What can you do? You're stuck on a deserted planet, no fuel, and your droid robots have gone haywire and are after your blood. Whatever you do, do it quickly!! **AMIGA**

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KENNY DALGLISH SOCCER MATCH

Imagine you're about take the field, when possibly the greatest player of the post war walks up and give you advice. Are you going to ignore him? Kenny Dalglish has set English soccer fans alight with his exploits over the last decade. His goal scoring skills are only equalled by his ability to set goals up. KENNY DALGLISH SOCCER MATCH places you in the same arenas as the big guys. He is fast, **very fast,** and with an amazing array of both offensive and defensive moves it is up to you to provide the skill and reflexes to move your team up the ladder. Throughout the game, Kenny will pop up from time to time to offer advice; ignore it at your own peril. There's a two player option, or get four friends around and play your own league.
HERE WE GO, HERE WE GO, HERE WE GO!
AMIGA

THE CHAMP

You say you're tough. Even Mike Tyson can be beaten! The road ahead of you is long, very long. First you have to prove yourself in the streets, brawling your way out of the gutters. Then starts the long climb to the top. Once out of the streets, the club circuit sets you on your way, hopefully. Hours of training and sparring will get you in peak physical condition, the punching ball, the sandbag, and the endless monotony of rope jumping, all must be endured in your quest for the ultimate — the Heavyweight Championship of the world. Fully endorsed by the World Boxing Council and with Rocky theme music, this is **THE** boxing simulator, everything except the bruises.
AMIGA, C-64

PINBALL MAGIC

That symbol of a mis-spent youth, the Pinball Machine, has now been computerised and presented in a totally new format. Instead of just playing the one machine, PINBALL MAGIC is a series of 12 linked machines. Access to the higher levels can only be achieved clearing all targets. PINBALL MAGIC features **ultra-fast** animation and great graphics. The ball's rolling, the score's ticking over, your heart's pounding and your fingers are twitching — PINBALL MAGIC is MAGIC PINBALLS! ***AMIGA***

EVEN “NORM” WOULD APPROVE OF THESE EXCITING GAMES

LOMBARD RALLY The biggest selling Amiga car game is **STILL** the best Amiga car game. **AMIGA, PC**

SKATE OF THE ART Subways, streets, parklands, can you navigate all courses on your skateboard? Skill and reflexes are your only help. **AMIGA**

INTERNATIONAL SOCCER Throw-ins, corners, free kicks, tackling, everything except the thugs. **C-64**

RINGSIDE Amazing animation, stunning sound, great graphics, fantastic fighting — the titles yours for the asking. **AMIGA**

BRIDGE TUTOR Play the classic game against a modern opponent, A.MIGA. Includes tutorial section for learners. **AMIGA, PC**

TURBO CUP A Porsche 944, a race track and you! What's stopping you? Fantastic saloon car racing game supplied with die-cast model 944 Porsche. **AMIGA, PC**

CHESS PLAYER 2150 If you want to watch a barbaric, board based game, buy that “other” chess game. If you want state-of-the-art in Chess game, that beats **ALL** other major chess games, buy CHESS PLAYER 2150. (Results available on request.) **AMIGA, PC**

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WEST PHASER is a breakthrough in game design. You and your trusty Colt .45 travel the length and breadth of the Wild West cleaning up cities, running varmints out of town, capturing outlaws and collecting rewards.

WEST PHASER is an arcade-style animated game using lightning fast animation on huge, detailed, cartoon-style figures. The game ranges from California to Utah, in saloons, out on the streets, and on the open plains. The bad guys aren't the only ones looking out for you. INJUNS!, the hills are crawling with them. You Colt .45 is your only friend!

WEST PHASER — the game can be controlled by mouse, or by **GUN!** The WEST PHASER GUN is a truly unique means of controlling the game. Simply line 'em up in your sights and FIRE!, but fire quickly, they're shooting back at you.

Using the gun adds a different atmosphere to the normal mouse controlled game. You're there! You're a part of it!

This is just the first in a series of GUN controlled games from Loriciels/Pactronics. Keep your eyes peeled for more fabulous PHASER compatible software.

For the programmers out there, the source code to include the gun routine into your programs is included on the disk. PACTRONICS will happily evaluate any gun driven software you write, with a view to commercial distribution.

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The benefits of adding extras to your C-64/C-128

by Eric Holroyd

Many of us commodore computer hobbyists would have started out in much the same way by buying a c-64 and coming to grips with the new technology a little at a time.

MOST FOLKS PROBABLY bought the very minimum required hardware due to lack of knowledge and took home a computer with tape drive and a cable to plug it all into the TV.

To give these earlier computer systems some of the benefits of newer technology there's now a huge range of "add-ons" to make them more sophisticated. The manufacturers of these "third party" items seem to support Commodore machines better than does CBM itself, with the list of new peripherals still growing. This for a computer which Commodore has several times tried to kill off!

A very large number of C-64s are still in use in Australian homes. Their owners apparently are very happy with them and have no intention of trading for an Amiga or any other computer. Having spent the time to learn how to use and program this mighty little machine they're staying with it.

My own first computer was a basic C-64 outfit and was great for a while (one week as I recall) before I became dissatisfied with the screen resolution. The one I saw in the shop had been so much clearer and when I went back I found out why. It was connected to a Commodore 1701 monitor! So I got one of those to use instead of the colour TV...

I bought some great games on tape including *Munch Man, Hunchback* and *Falcon Patrol* and really enjoyed playing them whenever I could get my daughter's boyfriend off the 64. He beat me hands down at *Hunchback* and his name is still top of the High Scores screen!

Unfortunately, loading from tape was a very s-l-o-w business and the fast load routines used by some software companies made it a hit and miss affair too. The tape drive had to be in perfect alignment for loading such games. I had it fixed and then it wouldn't load some other games. Sometimes there was a 15 minute wait for a load only to have it crash and I'd have to start over. Someone suggested I think about a disk drive as "that's the answer to all your loading problems"...

I went out and bought a 1541, took it home and plugged in, then spent the rest of the evening making a large number of phone calls to a friend who had a 1541 and knew how to use it. The (to me) highly technical Commodore manual had me completely bluffed and in the very first few pages even went into discussions on how to create SEQ and REL files. Never mind such things as "Here's how you switch on" and "A blank disk needs to be formatted before you can use it. Here's how". Don't laugh! I had absolutely no idea about anything (a fairly common attitude in new computer owners) and the result was that Telecom's profits rose considerably whilst I learned over the phone what to do next.

> ❝ I went out and bought a 1541, took it home and plugged in, then spent the rest of the evening making a large number of phone calls to a friend who had a 1541 and knew how to use it. ❞

Several days later I'd got the hang of it and was quite happy for a while as the improved loading speed of the 1541 over the tape drive was quite something. Then I went to tea at another friend's place and he had a MicroBee with a dual disk drive. The graphics on this machine just didn't compare with those on my C-64 but oh the speed at which his games loaded!! He had a number of games disks with menus of multiple games and all I had to do to load one was to select by letter and wait 5 or 6 seconds whilst the game loaded and ran itself. I had to have some of this, but it had to be on my C-64 so off I went on my enquiries again.

Speeding up

● I ended up by fitting a Cockroach TurboRom to my 64 and this speeded up the 1541 by about five times again so at last I was happy. I still have that 1984 vintage C-64 with the same TurboRom and use it from time to time for reviewing software and other purposes and it's a little beauty. Later models were redesigned and now have the circuit board completely soldered to its base so that any chip replacement work etc requires that the board be de-soldered first. As the Kernal Rom chip is soldered in from underneath the board it's now a very big job to fit a TurboRom. Luckily, the Cockroach people have made it available on a plug-in cartridge now so new C-64 users can still take advantage of its speed-up system.

Once I'd got the 1541 drive to load and save at the faster speed I was happy with the C-64. Then along came the C-128 and I just had to have one. Its newer, easier Basic was great to work with and was soon happily playing with graphics and music with the Circle and Play commands etc.

Super Snapshot

● The 1571 drive is pretty quick when the computer is in 128 mode anyway, and some programs and accessories let you speed it up even more. One such accessory is the Super Snapshot cartridge (recently reviewed in these pages) which lets you do a graphic printout at twice the speed if using a 1571 with a 64 (or 128 in 64 mode). Then again, some word processors such as *Fontmaster 128* and *Fleet System 4* automatically recognise the 1571 and adjust internally to use its speed.

This is probably one of the finest, most versatile drives produced by CBM and it's such a pity that they don't import any to Australia as so many users would love to have at least one. I got my external 1571 for the C-128D well over two years ago and it was the only one I could find anywhere. I got it at my local K-Mart and they told me that CBM's rep had told them there'd be no more coming in. Ever!

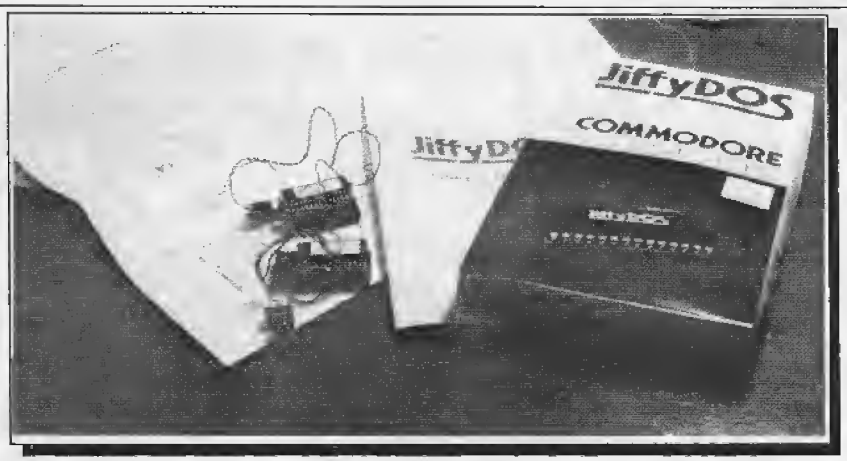
Seems the same thing applied to the fabulous 1581 drive, only none of them ever came in the first place officially. There have been a few imported privately by 128 users and a very informative letter from Richard Rumbel of Chipping Norton on this very subject was published in the January '89 issue of this magazine.

JiffyDOS

● Another great drive speed up system is JiffyDOS (from HPD) which speeds up disk operations by up to fifteen times. It's more expensive than the TurboRom but has more features so it's "horses for courses" as they say. JiffyDOS speeds up ALL the drive functions, including REL and USR so *Superbase* (and other productivity software) users get the benefit of increased speed too when searching through their files. Two replacement chips make up the JiffyDOS system, one in the computer and one in the disk drive and there are specific models available for either C-64 or C-128. This is one of the few speeder upperers that's made for 128 too. As with the TurboRom there's a facility to disable it if ever anything incompatible is encountered.

Disk drives

● There are a couple of drives available locally as an alternative to the 1541. One is the Accelerator. It claims a high degree of compatibility and is definitely worth investigating if you're thinking of adding a disk drive (or even a second drive) to your 64 as it is very competitive price-wise.



JiffyDOS C64

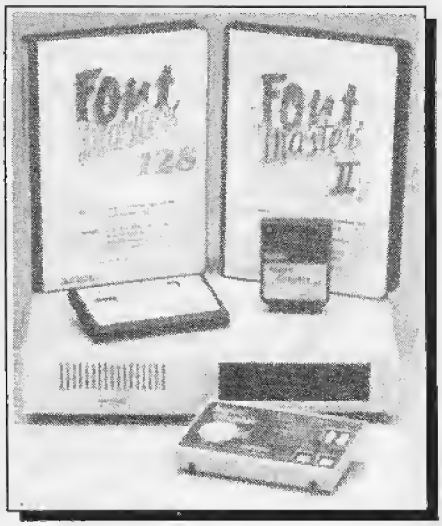
The 1541 and its alternatives are single-sided disk drives which will store 664 "blocks" of information (about 170K) whilst the 1571 is a double-sided drive which provides 1328 free blocks or 340K. Both use 5.25" floppy disks (so called because of the thin material that the actual disk is made from, and not the plastic casing in which it's housed). The 1571 will also read CP/M disks from almost any other type of computer such as Kaypro or Osborne and in its everyday Commodore mode loads much faster than the 1541, with a special "burst" mode that programmers have access to.

The 1581 drive is a "double-sided" drive and uses the 3.5" disk which is rapidly becoming an industry standard. It too is a "floppy disk" but is housed in a much stronger plastic case. The 1581 formats a disk to give 800Kilobytes of storage space (3200 Blocks Free in 64 parlance) which is far in excess of its predecessors and on a smaller disk too. It's loading is faster and the drive is generally acknowledged to be technically superior. Many Australian JiffyDOS users have imported 1581s for both C-64 and C-128 computers and report great results. Maybe we could invite letters from such owners to our Editor?.

Commodore magazine (the US one) in Nov '87 had a major review of the 1581 drive by Dan Baker. He said that it's "well suited to serve as a second disk drive for your data files in demanding applications" and his closing paragraph is worth quoting from extensively: "The 1581 disk drive is the latest release in a new line of peripherals for the 128 and 64. Other recent products include the 1351 mouse and the 1750 & 1764 RAM expanders. Coming soon will be new versions of GEOS and CP/M that support the 1581 disk drive. The extra power and capacity of these new products will keep your Commodore system working for you for years to come."

Mr Baker also addresses the question of "What software is available to take advantage of the 1581?" and lists a dozen such packages straight off as: *Easy Script 64, Superscript 128, Paper Clip II, Paperback Writer 128, Paperback Planner 128, Pocket Writer 2, Pocket Filer 2, Pocket Planner 2, Fleet System 2, Viza Star 128, Viza Write 128, CMS General Accounting*. This was in late '87 don't forget, so there must have been more since then.

GEOS is the acronym for Graphic Environment Operating System and, for the uninitiated, is a "point and click" system, available for both 64 and 128, whereby you point the arrow on screen at the icon representing the program you wish to work with in a similar manner to the Amiga and Macintosh computers. GEOS accepts a joystick as an control unit but



Fontmaster 128

COMPUTERMATE

Chart TOPPERS

FOR

Commodore

Productivity Titles	SUGG. RETAIL
AWARD MAKER PLUS	$39.95
DOODLE	$59.95
FAMILY TREE C-64/128 V2.0	$89.95
FLEET SYSTEM 2+ C-64	$59.95
FLEET SYSTEM 4 C-128	$79.95
GEOS 64 V2.0	$59.95
GEOS 128 V2.0	$69.95
GEOS WRITERS PACK 64 Pack contains GEOS 64 V1.3, GeoWrite, GeoSpell, GeoDex, Desk Pack 1 & Font Pack 1.	$129.00
LABEL MAKER	$49.95
SUPERBASE 64 or 128	$49.95
SUPERSCRIPT 64 or 128	$59.95
SUPER SNAPSHOT V5.0 Cartridge	$99.00
Leisure Titles:	
ALL DOGS GO TO HEAVEN	$49.95
ARCADE ALBUM 1 : Spy's Demise, Spy Strikes Back & Thunderbombs	$19.95
EYES OF HORUS	$39.95
F-16 COMBAT PILOT	$39.95
HOLE IN ONE GOLF	$34.95
MIGHT AND MAGIC II	$69.95
PICTIONARY	$49.95
RETROGRADE	$29.95
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WIZARDRY TRILOGY	$59.95

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serious users would probably want to enhance their systems with a mouse.

Mice

● Commodore's 1351 mouse was described in the GEOS hints and tips page of ACR's June 88 issue as having two modes of operation. In one, it acts as a joystick and can be used with all software that requires one. In the other mode, "proportional mode", the mouse communicates movement to the controlling software. All GEOS versions since 1.3 have the mouse driver to take advantage of this. Another mouse is the "Mouse & Cheese" system from Pactronics which is a graphics manipulation outfit which includes a mouse driver for GEOS.

A good alternative to both mouse and joystick is the IconTroller which is specially designed for GEOS use. This is a miniature joystick which sticks to the bottom right corner of the computer keyboard to be operated by a touch of the right hand little finger. It works like a charm and I found it even better than a mouse to use as there's no need for your hands to leave the keyboard area at all. It's cheaper than a mouse too.

Australian Commodore and Amiga Review's resident GEOS expert, Harry Waterworth, discussed both the 1351 mouse and the 1750 RAM Expansion Unit (he uses both on his C-128 system) in the September and November '88 issues. In the first one he said "The difference is astounding to say the least. With an additional 512K of RAM available, this takes your 128 computer up to 640K!" He also refers to the "beauty of the GEOS system where everything is done with the mouse...". In the second article he's looking at the *GeoCalc* spreadsheet and says that there are time reductions up to 96% when using the REU as against the standard C-128.

Just by the way, Harry complained about the high prices of GEOS upgrades etc and the long delivery times from USA. This was back in 1988 though, and since then there have been remarkable price reductions on all GEOS items, both 64 and 128 versions. Both new users and upgraders can get it through Computermate Products now for exactly the same number of dollars as American users, ie GEOS 64 RRP is $59.95 and the translation of US to Australian dollars means that we can actually buy GEOS cheaper here than users in the USA.

Ram expansion units

● I've only been able to find one retailer advertising REUs here in Australia (Briwall Australia, a mail order company which advertises in this magazine, have the Commodore 1750 Ram Expander for $429) and a quick phone around some of the Sydney suppliers failed to turn up any more.

Don Romero discusses the 1764 REU in Info magazine of Nov '87 and says that he tested this out thoroughly with GEOS and "it worked like a charm!" He did say that it came complete with a "128 styled power pack, which is needed to feed all those extra RAM chips the juice they need". Both the 1764 and its bigger brother, the 1750, are described on page 3-20 of

the GEOS 128 manual and say that "perhaps the biggest single performance improvement that you can make to your Commodore (now that you're using GEOS) is by obtaining one of the Commodore RAM Expansion Units".

If all this is true why can't we get them easily in Australia? Perhaps the answer lies in Don Romero's remark about the necessity for a beefed-up power pack. The USA's different voltage would mean that CBM would have to design a different power pack for Australian and European REU users and maybe they haven't yet done that.

It's probably worth making enquiries through Commodore's Sydney office about all this, and if it wasn't very late on a Saturday night as I'm writing this I'd do it myself. Incidentally, the word processor I'm using is *Fleet System 4*, which supports the use of the REU for its Thesaurus and Spell Checker. Wish I had one...

Cartridges

● On an entirely different subject now: We've done reviews of many cartridges for the C-64 over the months and years and here's a list of such units currently available. Most have been well covered in fairly recent issues of ACAR so I won't go through all their features. Suffice it to say that all the cartridges currently available have all or some of the following features:

- Disk drive fast load
- Built-in DOS wedge
- Sprite editor
- Machine code monitor
- Screen saver
- Menu builder
- Screen printer
- Desktop accessories
- Games cheat maker
- Specialty keys
- Backup full disk
- File copier
- Disk drive monitor
- Track & sector editor
- Character editor
- Picture editor etc etc

The various cartridges are (in alphabetical order): Action Replay, Expert, Graphics Utility, Partner 64, Super Snapshot, Turbo-Menu, TurboROM, Warp Speed. I'll leave you to look up the relevant reviews and decide for yourself which cartridge(s) best suit your needs. I currently have five different cartridges on the desk and have decided that what I now need is the Aprosand cartridge expansion unit. This has slots to take four cartridges at once and all slots are switchable so that you can select the cartridge to be currently used. Sounds like a good idea and will save a lot of wear and tear on the cartridge port.

Graphics

● The graphics capabilities of the 64 let would-be artists produce some quite fascinating pictures.

Computermate

Chart TOPPERS FOR AMIGA

Productivity Titles	SUGG. RETAIL
CITY DESK V2.0 (PAL)	$239.00
DIGI-PAINT V3.0 (PAL)	$129.00
EXCELLENCE	$299.00
ORGANIZE	$79.00
PAGESTREAM V1.8	$259.00
PHASAR V4.0	$129.00
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THE WORKS PLATINUM	$249.00
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Leisure Titles:	
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LEGEND	$39.95
MICRODEAL HITS 1. Goldrunner, Karata Kid, Jupiter Probe and Slaygon.	$49.95
MICRODEAL HITS 2. Leatherneck, Tanglewood, Time Bandit and Major Motion.	$49.95
ROMANCE OF 3 KINGDOMS	$99.00
SEAHAVEN TOWERS – Solitaire Vol. 1	$49.95
TABLE TENNIS	$39.95
TARGHAN	$39.95
TAROT MASTER: Read the Future	$39.95
ULTIMATE HINT DISK II	$34.95

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There's a great deal of graphics software which works with the Koala Pad (unfortunately no longer available). Luckily the Animation Station is compatible with most of this software and is a graphics tablet that lets you draw pictures with a stylus so that your artwork then comes up on the monitor screen. Colour or shade it, then save it to disk for use in slide shows or printouts.

If you prefer to "draw" directly onto the screen then use the Inkwell Light Pen which works very well with the Flexi-Draw software. Pictures produced on the 64 are in either HiRes or MultiColour format and can be translated and manipulated in many ways by the excellent Cockroach Graphics Utility for use in many other programs. This utility also includes a slide show maker which will show your art in a continuous show.

Print Shop is another great utility and one which produces printed banners, greetings cards, posters etc, It lets you choose from a vast number of graphics to go with your choice of fonts. This is probably the most popular C-64 utility of all time and there's also a *Print Shop Companion* with more graphics and fonts, plus Calendar Maker and Graphic Editor too.

Then there's *The Newsroom* with which you can create your own newspaper. Over 600 graphics and 5 different fonts are included and it all prints out very nicely. Useful for user group newsletters or school magazines etc too.

Many of the things I've mentioned require a printer, and I can't imagine me ever having a computer without one anyway, it seems such an integral part of the system now. The one I'm using with the C-128 to do this article on is the Star NX-10 coupled with a Xetec Super Graphics interface. This is a great combination which suits me down to the ground as I can print out my business letters etc in Near Letter Quality either from the printer's own front panel controls or direct through the interface (which also lets me use two of my favourite fonts and does screen dumps too).

This C-128 system I've just described is a pretty good all-round work station with plenty of the benefits I've been talking about. As I said before, I've already added a second 1571 disk drive and I'd like to expand it still further by adding an REU, the Partner 128 cartridge, and the Aprosand four slot cartridge adaptor which would all give me added scope.

I was suppose to be writing "just a little piece" on the benefits of adding to your Commodore system. There are so many "add-ons" available though that I got a bit carried away talking about it all. You can see from all this that there's a lot you can do to build your computer into your own personalised and powerful work station. Whether you use the computer for writing, producing graphics, managing data, or printing brochures and fliers, the hardware is all there to do it with. When the day's work is done and you want to relax there are literally thousands of games to choose from, but make sure you don't stay up all night doing that or you won't be able to get back into "work mode" in the morning!

Where do you get it?

● Some of the products mentioned are available through the following distributors, who are not necessarily the only or exclusive distributor of that product:

● **IconTroller**
ComputerMate (02) 457-8118
RRP $39.95

● **1351 Mouse**
Commodore (02) 427-4888
RRP $???

● **GEOS 64**
ComputerMate (02) 457-8118
RRP $59.95

● **GEOS 128**
ComputerMate (02)457-8118
RRP $69.95

● **Commodore 1750 Ram Expander for the 128**
Briwall Australia (062) 880131
RRP $429.00

● **Accelerator Drive**
Micro Accessories (08) 287-0191
RRP $199.00

● **TurboRom Cartridge**
MultiCoin Amusements (075) 375-711
RRP $39.95

● **Aprosand 4-slot unit**
ComputerMate (02) 457-8118
RRP $59.95

● **JiffyDOS 64**
HPD (08) 252-3300
RRP $99.00

● **JiffyDOS 128**
HPD (08) 252-3300
RRP $129.00

● **Fontmaster 128**
ComputerMate (02)457-8118
RRP $89.95

● **Mouse & Cheese 64**
Pactronics (02) 748-4700
RRP $129.00

● **Fleet System 2 Plus** for C64 $59.95,

● **Fleet System 4** for C128 $79.95
ComputerMate (02) 457-8118

● **Super Snapshot**
ComputerMate (02) 457-8118
RRP $99.00

● **Turbo-Menu**
HPD (08) 252-3300
RRP $39.95

● **Partner 64**
Dataflow (02) 331-6153
RRP $59.95

● **Action Replay**
Pactronics (02) 748-4700
RRP $139.00

● **Graphics Utility**
MultiCoin Amusements (075) 375-711
RRP $59.95

● **Warp Speed**
YPA (02) 899-2348
RRP $59.95

● **Superscript 128**
ComputerMate (02) 457-8118
RRP $59.95

● **Paperclip II**
ECP (075) 963-488
RRP $94.95

● **Pocket Writer 2**
Questor (02) 662-7944
RRP $69.95

● **Animation Station**
ComputerMate (02) 457-8118
RRP $139.00

● **Print Shop**
Dataflow (02) 331-6153
RRP $69.95

● **Print Shop Companion**
Dataflow (02) 331-6153
RRP $54.95

● **Newsroom**
Dataflow (02) 331-6153
RRP $49.95

● **Star NX-10 printer**
Star Micronics (02) 748-4300
RRP $???

● **Xetec Super Graphics**
ComputerMate (02) 457-8118
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Expanding your Amiga

by Andrew Farrell

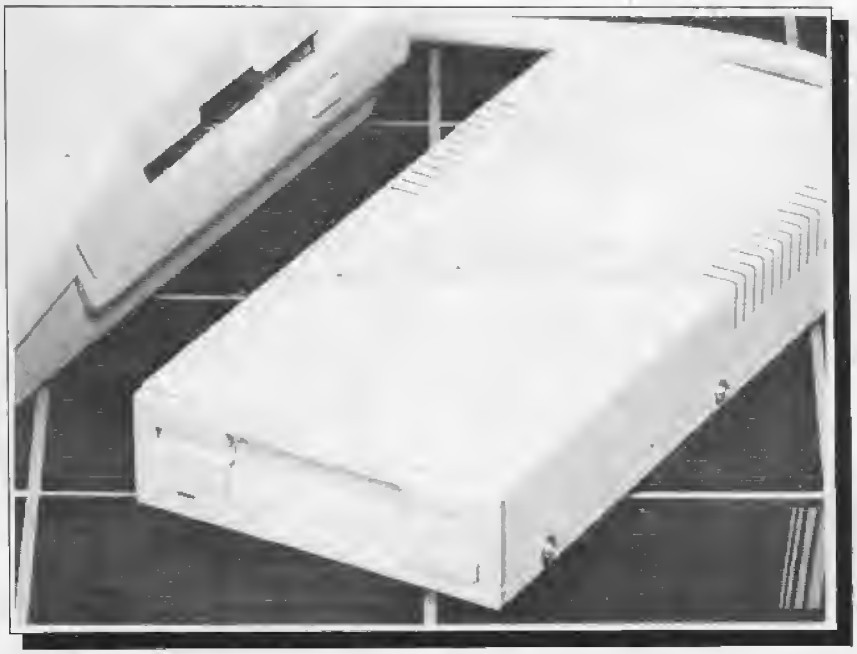
When the out of memory errors, disk swapping and waiting for programs to load really starts to eat out your patience, it's time to check out what is around in the way of extra ram, and extra disk drives.

FOR THE ULTIMATE cheque book emptier or credit card burner, why not go all out and grab yourself one of the new breed of hard drives.

Yes folks, you too can have megabytes of mass storage a mere SCSI interface away. Whilst purchasing a hard drive can seem like you've just payed for a second Amiga, the benefits are truly worthwhile. But before we get too carried away with Quantum drives at sub twenty millisecond speeds, let's start at the affordable end of he scale.

An extra drive

● Priority one. Your Amiga is a disk based system. Having a single drive is like having one leg. It is possible to get along, but the whole process looks and feels really awkward. Sure, you can create a RAM drive, or make a custom Workbench for every program you might have. At the end of the day, the convenience of one Workbench, with everything on hand all the time, is worth many hours DIRing your way through disks in search of some profound utility or font or text file.



Master 3A

The extra drive market has always been a competitive market place. Lately pricing has stabilised to the point where you can expect to pay between $199-$249 dollars. Still a fair sized variation, leading one to wonder just what the differences are, and if indeed the cheaper models will do the same job.

Probably the most important part of the disk drive is the drive mechanism. This is the main chunk, which is purchased in mass quantities by people who make Amiga drives from suppliers such as Citizen, NEC, Fujitsu and TEAC, to name a few. From time to time, one manufacturer seems to gain a clear lead over the others. The general reliability is up and cost is down.

One way to find out which mechanism currently holds first place in the quality stakes is to ask the manufacturers. They, of course, will tell you it's the mechanism they're currently using.

Option two is to scan the Bulletin Boards, User Groups and back alleys of Amiga hangouts with your ear to the ground to determine which drive is being complained about the most. You can then safely assume the rest are pretty well all right.

Option three is to grab yourself a pile of 3.25 disks, format each one one on every drive and count the failures per drive. The trouble with using this method is you are primarily testing the quality of the media more so than the drives. Media is hopelessly inconsistent.

So we used a combination of Option Two - ear to the ground tactics, and a close examination of each of the drive's internals, packaging, manuals and overall look and feel. Then we throw them all around the room and the one that still works after a thorough treatment is pronounced the winner.

Preparing an article like this, you are always up against the fact that some people will not bother to send you their drive. In past comparisons we have still included the drive by sourcing them

(continued on page 30)

from a local shop - and yet again we had to do just that. However, we were still unable to obtain a working model of every unit tested either because the supplier did not respond, or has never made its existence known directly to this magazine.

I should point out that there are many small time back yard operators who build add-ons for the Amiga which are of an excellent quality - check with users in your area first to ensure the product is as good as they say. Here's the list of external drives we received and our comments after examining their internals.

Computermate - Master 3A
RRP $249
Slim Line
Flip On/Off Switch
Pass-Through
Citizen Mechanism

● **Comments:** No dust cover, no vent filter. Identified by drive LED which is flush with front panel surface. Power cable fell apart during dismantling - drive was faulty.

Megaslim - H.P.D.
RRP $199
Slim Line
Slide On/Off Switch
Pass-Through
TEAC Mechanism

● **Comments:** Cloth filter on vent and aluminium cover over drive to help prevent entry of dust. Identified by bevelled edge around drive LED. Good construction, good value for money.

MATRIX - Roctec
RRP $219
Slim Line
Slide On/Off Switch
Pass-Through
Citizen Mechanism

● **Comments:** Similar to H.E.S. - filter on vent, cover on drive. Good construction - manual shows picture of an A1000 only! (Previously known as Acudat)

Uni-Drive - Computer Discounts
RRP $199
Slim Line
Flip On/Off Switch
Pass-Through
Fujitsu Mechanism

● **Comments:** No vent, but a full dust cover on drive. Slide in mechanism rather than a cable join like all the others. Optional external power source, expandable to a twin drive system if required. Separate cable. Australian/American produced - appears to be hand soldered.

Overall

● All the above four drives look pretty much the same. The mechanisms in two are the same. All have a slimline case, one meter reinforced cable and beige colour. However the one from Computermate seems to be missing a few vital parts in the dust protection department. Although dust is not a huge problem in most suburban homes, and the nature of 3.25 disks has reduced the risk further - it is still a worthwhile consideration.

Word on the grape vine is that both the TEAC and Citizen mechanism have proven reliable. Both are very similar in

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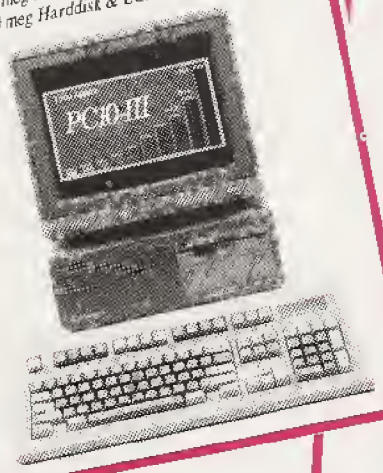

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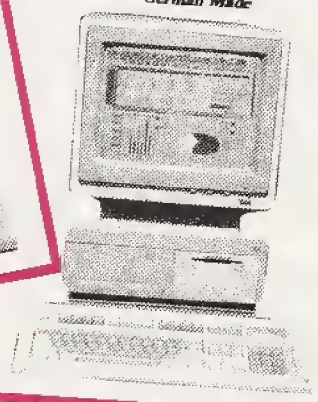

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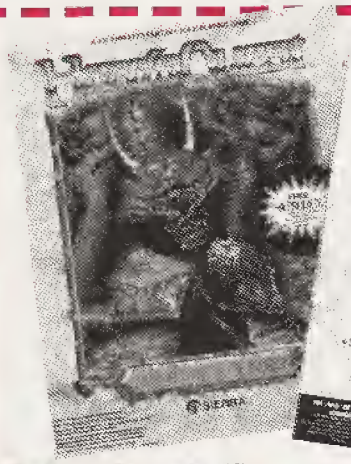

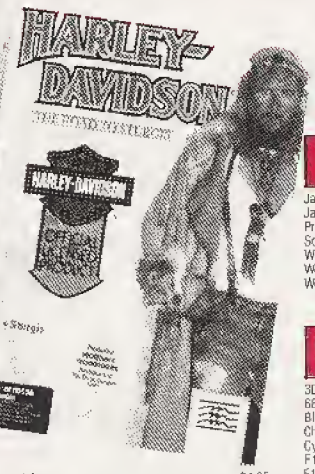

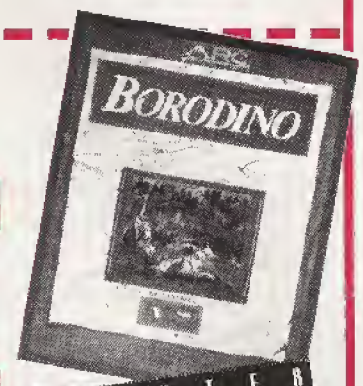

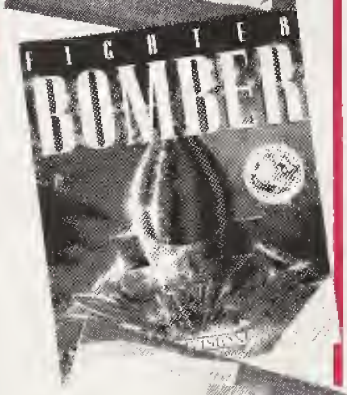

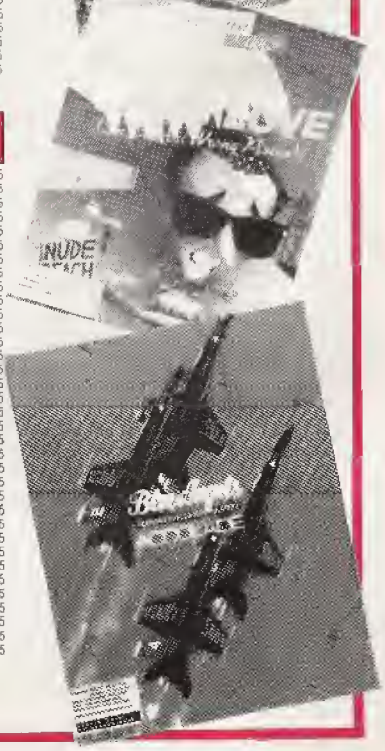

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construction quality, although the TEAC mechanism appears to have fewer moving parts, which is usually a small advantage.

Other external drives include:-

Commodore 1011

(not supplied for review - the original 1010 now sells for $199, but is bulky, has no switch or pass through port.).

California Access

(not supplied for review)

Thanks for the extra memory

● Once you have your second drive connected up and ready to go, the next must have is an extra 512K RAM. Like the drive market, there is plenty of choice, and plenty of competition. There are also a number of small operators with home-made RAM boards doing amazing things pricewise and otherwise. Some of these are very good and some aren't so good.

The big players build reasonably good quality boards, which have a warranty, are consistently supported and produced and are still pretty cheap.

Before purchasing, you should think very seriously about just how much RAM you would like to end up having. A little extra money spent on empty sockets in the early days can add up to a big savings down the track. For example, although a 1.5 Megabyte board costs a little more - even with only 512K installed - as you add more RAM you'll be saving the difference.

For game players and occasional hobbyist type people, one megabyte should be ample. For graphics, animation, serious music and or/digitising of any sort - more is very beneficial. Our office machine currently enjoys five Megabytes of RAM - four of which is 32 Bit. Yes, we do occasionally run out, but usually that is plenty. Typically we run two text editors, a terminal program, graphics program and desktop publishing package concurrently. If you're serious about using the Amiga, at least three Megabytes is a starting point.

Back to earth. Game players will find extra RAM creates a problem and solves a problem. Some games won't work with extra RAM, others will only work with extra RAM. Some RAM boards have a switch others do not.

What they don't tell you is to flick the switch and diable the extra 512K RAM on your A500, you must switch it off. Then you have to remove any entangling cables, flip the unit over, open the expansion slot and then flick the switch. Replace the expansion slot cover, flip the computer again, plug the cables back in, and power up. If you don't mind doing that - which incidentally is bound to end up wrecking either a cable, your RAM slot cover or your patience - then buy an expander with a with a switch.

We examined three available 512K RAM expansion units. These were:

M.A.S.T - Micromegs
512K RAM
Clock/Calender
Li-Cell
No Switch
1MB DRAMs
RRP $189
Australian

H.E.S.
512K RAM
Clock/Calender
Nicad Battery
Enable Switch
RRP $???
Australian

Power Peripherals - Spirit
512K RAM
Clock Calender
No Switch
RRP $199
American

Comments: On specification, the H.E.S. unit looks the best. Of course, construction and price also come into the picture - and the question of that switch. The M.A.S.T unit uses the newer, low power 1MB Drams, whilst the Spirit board is a little better finished than the other two units.

Documentation was included with all three units - with H.E.S. taking the cake again. Inserting 512K RAM is pretty simple providing you don't force it and do align the pins correctly. All the units we tried fitted the expansion recess in such a way as to naturally align correctly with the expansion port. Installation is easy - setting the clock is where most people come unstuck.

From the CLI type:-

DATE DD-Month-YR

Where DD is the day of month, Month is the typical three letter month abbreviation and YR is the trailing two digits of the year. EG: DATE 05-MAR-90

Next you need to save the date setting into the battery backed RAM. Type:-

SETCLOCK OPT SAVE

Now, Amiga will always know the date!

(Next issue we will look at going beyond 1MB on your A500!)

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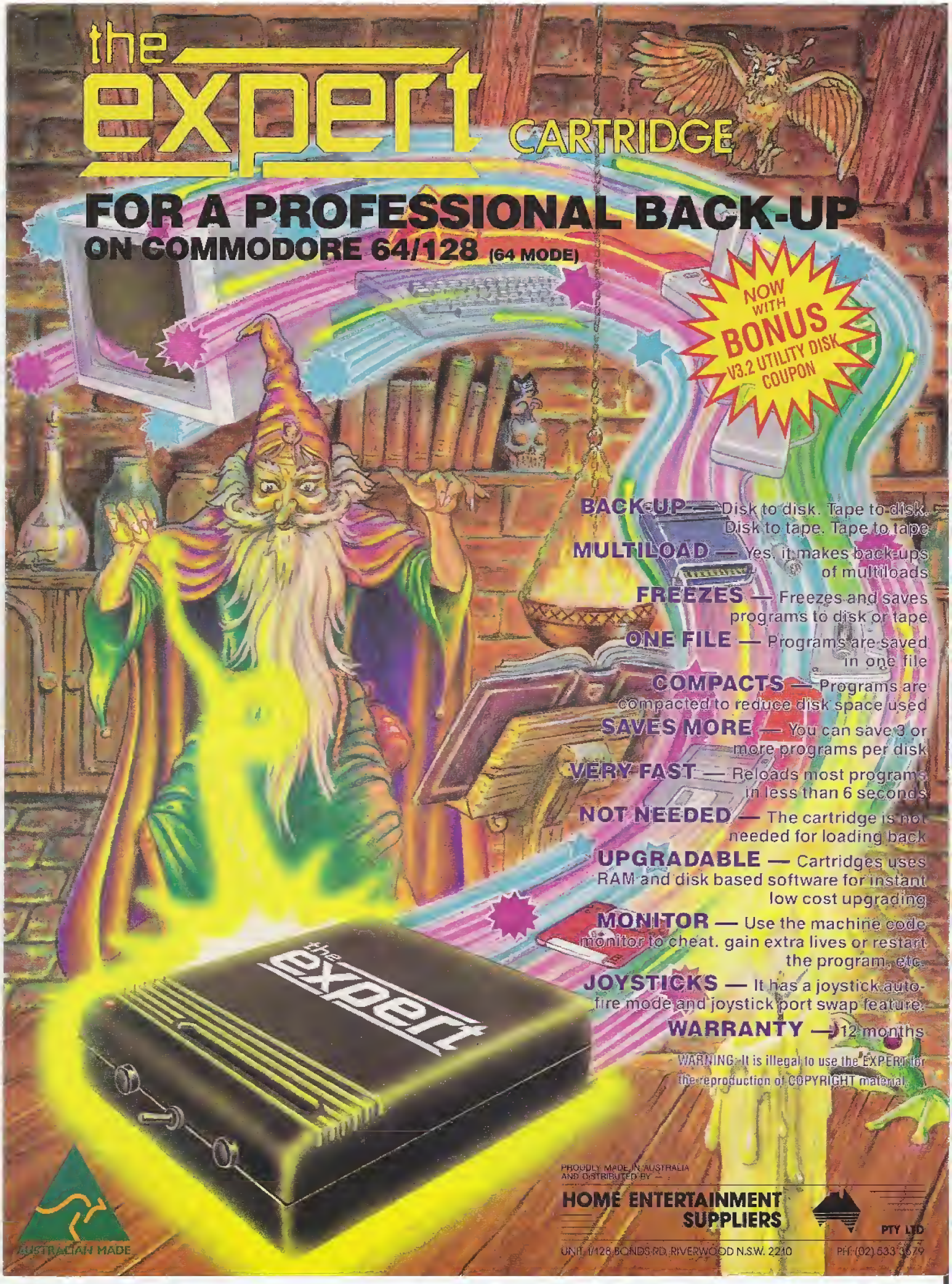
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NOT NEEDED — The cartridge is not needed for loading back
UPGRADABLE — Cartridges uses RAM and disk based software for instant low cost upgrading
MONITOR — Use the machine code monitor to cheat, gain extra lives or restart the program, etc.
JOYSTICKS — It has a joystick auto-fire mode and joystick port swap feature.
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Hard Drivin'

by Andrew Farrell

AmigaDOS flies with a little help from a fast hard drive. There's also the added convenience of having all your favourite programs in one place.

AMIGA 2000 OWNERS might like to jump ahead to the hard card review further on. However, for A500 users, we've tested three popular choices in hard drives - all are readily available.

We often hear complaints from people that Amiga 500 hard drives are rather expensive when compared to adding a similar unit to your average IBM XT. There are some very real differences in what you're getting which semi-justify the price difference.

Most Amiga hard drive interfaces include room for extra RAM. Most have an external power source and include housing and relatively sophisticated installation software. The other major difference is the drive interface, which is usually SCSI (See **What is SCSI?**). IBM XT drives use a slower interface, and draw power from the PC. Installation is difficult, and little or no software is included to help you.

Most Amiga hard drives come ready formatted and partitioned to use. The operating system is installed and ready to run. All the necessary utilities are included to reinstall if you so desire or to adjust the partitioning of the drive. Since AmigaDOS is somewhat more complicated than your average PC, we suggest you ensure someone who knows exactly what they're doing carries out any reinstallation or adjustment of existing partitioning.

I recently undid the work of someone who had set up a 20Mb hard drive as a 33Mb drive for a client - no wonder they were getting so many read errors!

Thank you to all those who loaned us equipment to test, especially Computer Spot Hornsby who supplied as the Commodore A590. Commodore were unable to locate a spare unit in time for our test.

Trumpcard

One wonders sometimes.

CommodoreA590

Expandable to 2MB/SCSI/XT

● Probably the smartest looking hard drive you can add - being a genuine Commodore product and all. The A590 follows the 500's sleek lines rather nicely. The package comes complete with a power supply, installation disks, instruction manual and earth clip. We completed a full review in our September issue last year (Vol 6 No.9) - so we won't delve into too much detail here.

On board is room for an additional two megabytes of RAM, a SCSI interface and connected to the XT interface an XT type hard drive. This "XT" standard is some weird and wonderful new protocol Commodore have landed which is only suitable for the A590 and Commodore PC's. (Yes, it is based on the ST-506 standard)

At the moment, the A590 arrives with a 20 Megabyte drive and that's it - no other choice. If you want more you'll have to extract the 20Mb drive, and install either a SCSI drive or a larger XT type drive from Commodore.

Trouble is, the XT drive you pull out has very limited resale value - only a Commodore PC user would find it useful. This strange arrangement of standards and limitations is likely to change, but for the moment they remain typically Commodore. We suspect this whole XT business was a sad attempt at trying to corner the hard drive market for A500's.

The hard drive is preformatted, and installation is relatively simple. The included documentation is very comprehensive, and additional utilities to make reinstallation or alteration of your current setup are included.

RRP $999.00

Review unit supplied by Computer Spot Hornsby.

● **Worst Points:** Redundant drive type, incompatibility with some software.

● **Best Points:** Construction, value for money.

(Continued on page 34)

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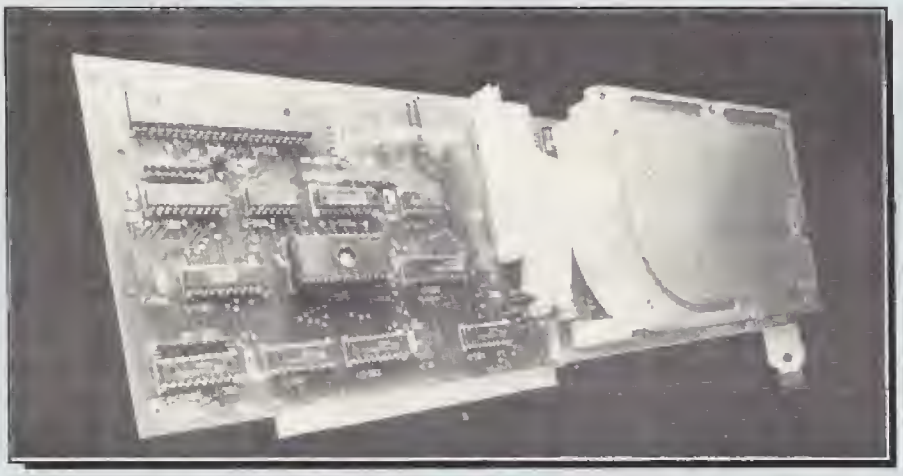

Trumpcard - Hard Card

Trumpcard

Expandable to 2MB/SCSI

● This is the budget alternative at around $499 without the drive - a little wider and taller than the A590. The Trumpcard arrives standard with a SCSI interface - supply your own SCSI drive at the time of purchase or from your own resources. Extra memory may be added after you first purchase a board for $499 - although this will require you obtain an external power supply (not included with the unit). At the time of writing, no power supply was available, although several people have adapted other power supplies.

The Trumpcard is not as well constructed as either the A590 or GVP unit. The basic wedge shape is reasonable - but the overall look is a little cheap. Inside, everything is functional. Power is extracted from the A500. A utility disk and manual is included, which we are assured is every bit as good as the A590 documentation, if not a little better.

One benefit of the Trumpcard 500 is the ability to remove the SCSI interface board from within the case and install it in an A2000. This helps ease the upgrade path, and would certainly make more sense than a redundant A590 drive.

There is no external SCSI connector, although one could very easily be added - a place in the casing already exists for the connector.

● **Worst Points:** Overall look, no fan or power supply.

● **Best Points:** Value for money, upgrade path.

GVP Impact A500

Expandable to 4MB/SCSI

● Great Valley Products have been churning out some serious power user type products for the A2000 for some time. It was therefore a fine thing to see them turn their attention to the A500 and supply some equally well endowed items such as the Impact A500 - tagged as the ultimate expansion tool.

Our test unit included four megabytes of RAM and a 40 Megabyte Quantum ProDrive. It worked beautifully. This is one serious add on. The interface is strictly SCSI - anything from 20MB to 102MB. The DMA arrangement spews data into an onboard 16KB buffer in order to put an end to bitplane induced drive speed degradation. An additional SCSI device may be connected to the rear of the unit.

The Impact has its own power supply and looks every bit as beefy as it sounds. This is no sleek peripheral, somewhat boxy in fact - but it is reasonably colour co-ordinated. Installation is a simple affair - just slide into the 86-Pin expansion port on the left side of your A500. A toggle switch allows the auto-booting facility of the Impact to be enabled or disabled, thus allowing auto-boot games to be loaded from floppy.

The operation and performance of the A500 system is the same as the A2000 hard card.

GVP Impact A500

All about SCSI

● SCSI OR SMALL computer systems interface was originally developed from the SA SI, Shugart Associates System Interface. The SASI was a slow, unintelligent, single user interface. SCSI was evolved to provide a high performance disk subs system capable of having high transfer rates, multiple hosts, multiple devices, and multi-tasking. Being high performance it follows that the components of a disk subsystem need to be of a similar quality as the interface.

With disk access measured in terms of milliseconds, rather than the micro or nanoseconds that electronic systems are measured in, disk access times become critical. Fast transfer of data and fast access time are essential for a disk system to have if the SCSI interface is to operate at optimum performance.

There are two types of SCSI controllers, embedded or bridge. Bridge controllers have more features, such as caching, than the embedded version, but they are much more expensive, this is because caching requires memory. This memory can be up to 16Mb. Embedded controllers will usually have only 8 or 16k as a buffer, although on some newer drives 64k is being included.

System speed is improved with a large buffer, as zero latency track read or look ahead prefetch can be employed. The controller reads sectors from the disk in the area of the head even though they have not been requested. It works on the assumption that the next read request will be for data that is adjacent to the data just read. If this is the case then the data can be transferred from the buffer

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without the need for the head to seek it.

The FastFiles system, now used by Amiga hard disks, causes data to be written in adjacent blocks, thus reducing read time. A major advantage of SCSI is the disconnect/reconnect feature. This enables a drive to be isolated from the interface when it has received a command to fetch some data. The interface is now able to address another device while the original is looking at its disk. When it has read the data the drive will reconnect and transfer. This allows many drives to be multi-tasked and stops a slow device, such as a tape, from hogging the system.

IMPACT A2000-HC/40Q

by Dennis Nicholson

● This hard drive, or more correctly hard card, has been designed solely for the Amiga 2000 range of computers. It consists of a SCSI controller board fitted with a Quantum 40meg drive and two AutoBooting EPROMS (the EPROM chips allow the user to boot up their computer without the need of the KickStart or Workbench disks). The card uses a 16k onboard cache to maximise speed.

The Quantum hard drive unit is an extremely efficient drive, it can support up to 4 Megabytes per second data transfer rates which is higher than AmigaDOS can currently handle. It is also one of the few drives to have an "Auto-Park" feature which allows the Read/Write heads to be automatically placed in a "park" position when the computer is powered down. It has built-in hardware error detection/correction and retry abilities to protect your valuable data.

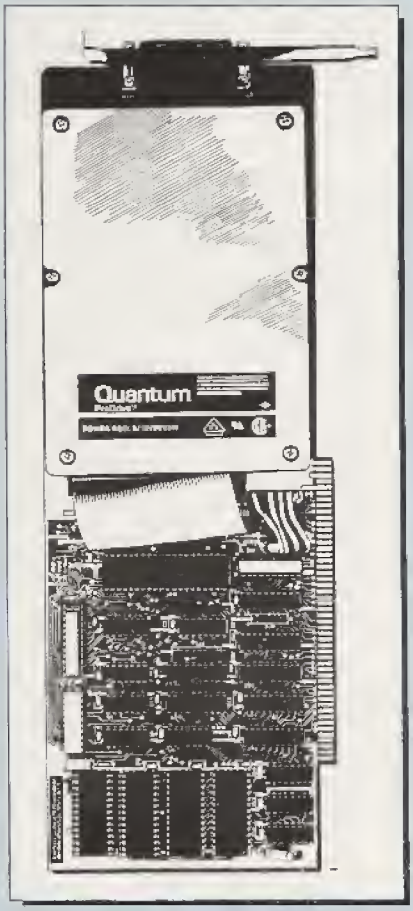
The entire assembly slots neatly into any one of the Amiga's five 100-pin internal expansion slots. The installation manual recommends that the unit be installed in the end slot closest to the power supply, so that only a single expansion slot is used as the hard drive unit will hang over unused space inside the 2000. Power for the unit is supplied internally by the Amiga.

Installation is simplicity itself. After removing the computer's top cover and the rear metal bracket slot cover the unit is gently pressed into the chosen slot and one end is screw-mounted to the back of the machine. The "Hard Disk" LED (green light) cable from the Amiga is then connected directly to a supplied plug on the hard drive. If your 2000 is unfortunate enough to be still using the V1.2 KickStart ROMS then a jumper pin (J2) on the HD board has to be removed, as it is not possible to Autoboot using V1.2 KickStart. If your machine has V1.3 ROMS then all is well. Replace the top cover and the hardware installation is complete. You are now ready to initialize the hard disk and start the software installation.

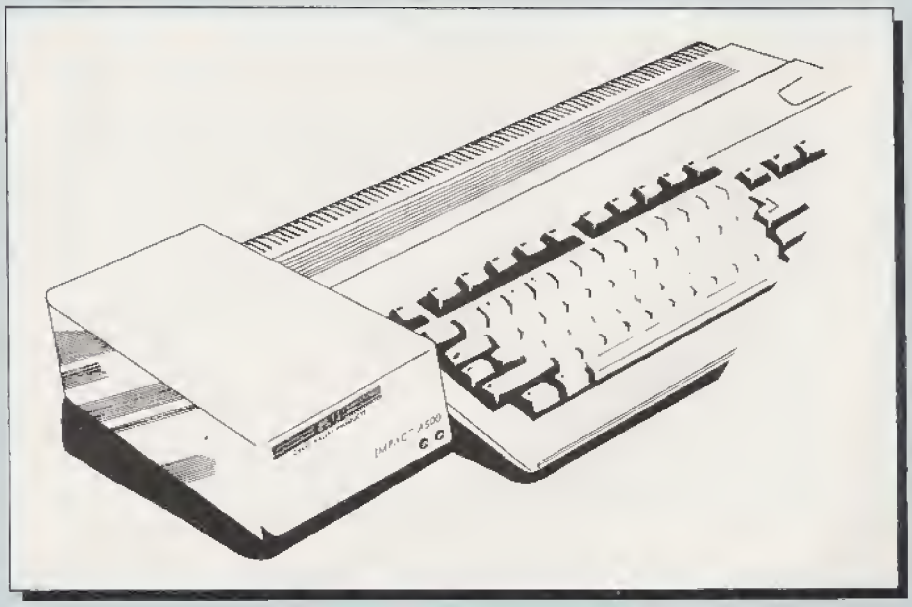
GVP supply an installation disk with the unit. It is basically a Workbench disk plus the files required to run and install the hard disk. All you do is boot up your machine using the disk and double-click on the "install" icon. Once started the hard disk will be automatically formatted and initialised. All that is required from the user is to answer several questions along the way as to how he/she would like the hard disk partitioned. The standard procedure is to create two partitions DH0: and DH1: All the relevant AutoBoot and AmigaDOS files will be automatically copied to their respective directories situated on the DH0: partition. The FastFileSystem format is fully supported.

Now it's time to remove all floppy disks, reboot the Amiga and sit back in total amazement and watch your computer fly as it's never flown before! As a comparison booting from a standard 1.3 Workbench disk takes one minute thirteen seconds, booting from the hard drive takes 23 seconds.

The IMPACT HC series of SCSI controllers provide two separate SCSI connectors. Namely the 50-pin internal SCSI connector and the 25-pin external SCSI connector. Each one of these is intended



Impact A2000-HC/40Q



Impact A500-HD/Ram subsystem

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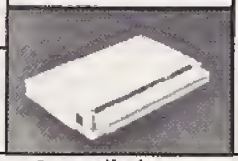

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for a different purpose. The internal connector is for attaching SCSI peripherals which are mounted within the 2000 casing, such as another hard disk drive. The external connector is intended for attaching other external SCSI devices which have their own power supply and case. Up to seven external units can be attached to the Impact SCSI controllers. The external connector is also electrically compatible with the Macintosh computer.

I have had my HC/40Q since October 1988 and as the editor of *Graphics-Palette* (the Amiga disk-zine) I have put it to VERY heavy use almost daily. It has never faulted, its flawless performance has not even produced a hiccup. The unit's incredibly fast 11 millisecond access time still continues to amaze, such as loading *Deluxe Paint III* in 2.2 seconds!

The GVP HC/xxQ series is now also available with a Fast RAM option onboard. Up to 2megs of Fast Ram SIMM chips can be added to a small board attached directly to the controller board allowing the user to save precious internal bay space. Available as the:

- HC/40Q = $1,345.00
- HC/80Q = $1,990.00
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(Thank you for loan of Impact A500)

- **Best Points:** Performance, expandability, construction.
- **Worst Points:** Initial cost. ❑

Performance test

● Performance timings using diskperf: on a 20meg partition (DH0:) (All tests using Workbench 1.3)

(Running 68020)	DH0:	DH0:
File creations (files/sec)	13	14
File deletions (files/sec)	34	43
Directory scan (entries/sec)	104	227
Seek+read (seek+read/sec)	109	149
Read speed, 512 buffer (byte/sec)	59579	73584
Read speed, 4096 buffer (byte/sec)	184309	221530
Read speed, 8192 buffer (byte/sec)	258655	301026
Read speed, 32768 buffer (byte/sec)	281620	325982
Read speed, 131072 buffer (byte/sec)	291281	345684
Read speed, 524288 buffer (byte/sec)	291281	345684
Write speed, 512 buffer (byte/sec)	29033	29073
Write speed, 4096 buffer (byte/sec)	138860	154581
Write speed, 8192 buffer (byte/sec)	161474	216201
Write speed, 32768 buffer (byte/sec)	160076	216946
Write speed, 131072 buffer (byte/sec)	161474	218453
Write speed, 524288 buffer (byte/sec)	162154	219214

512KB RAM EX

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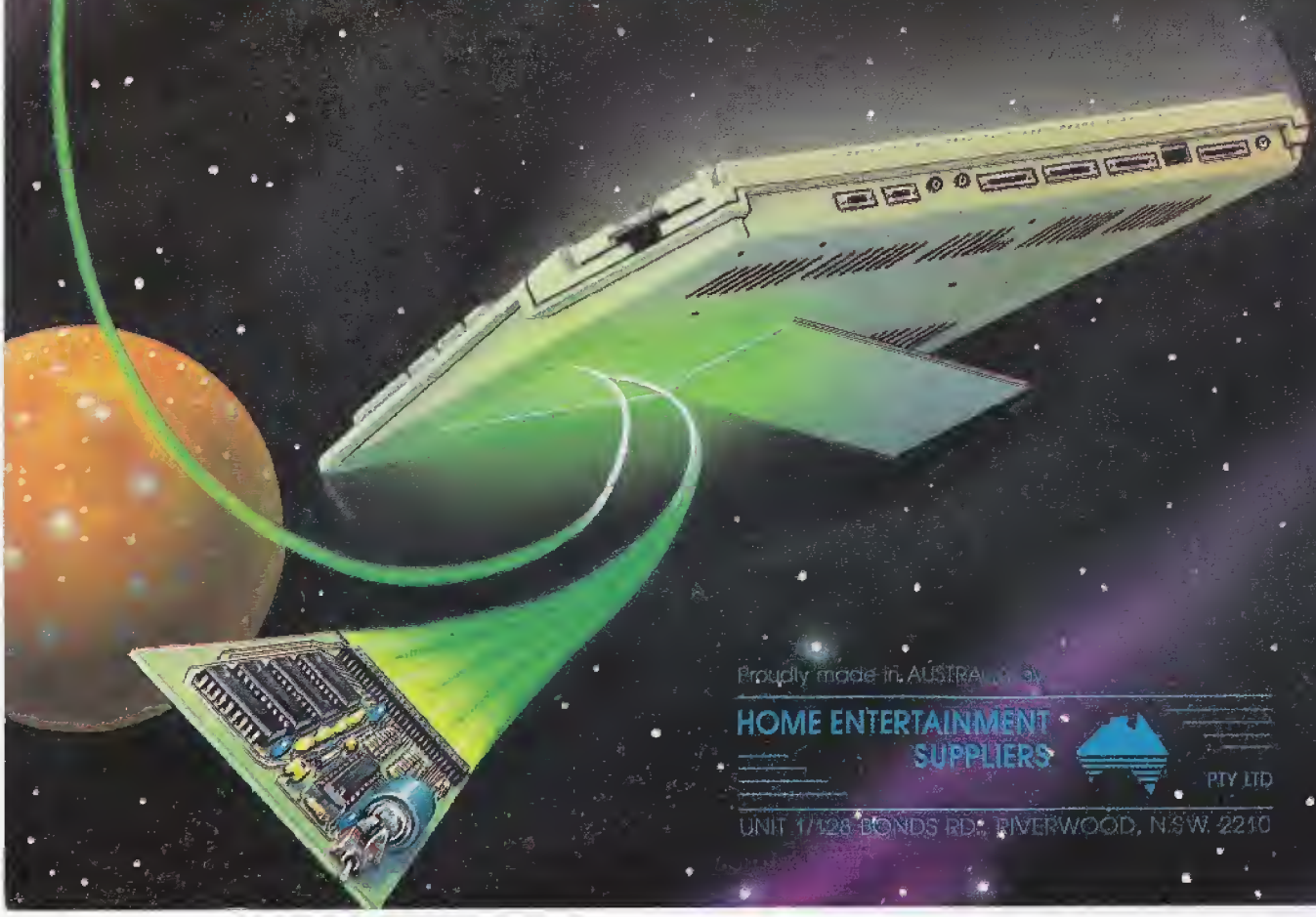

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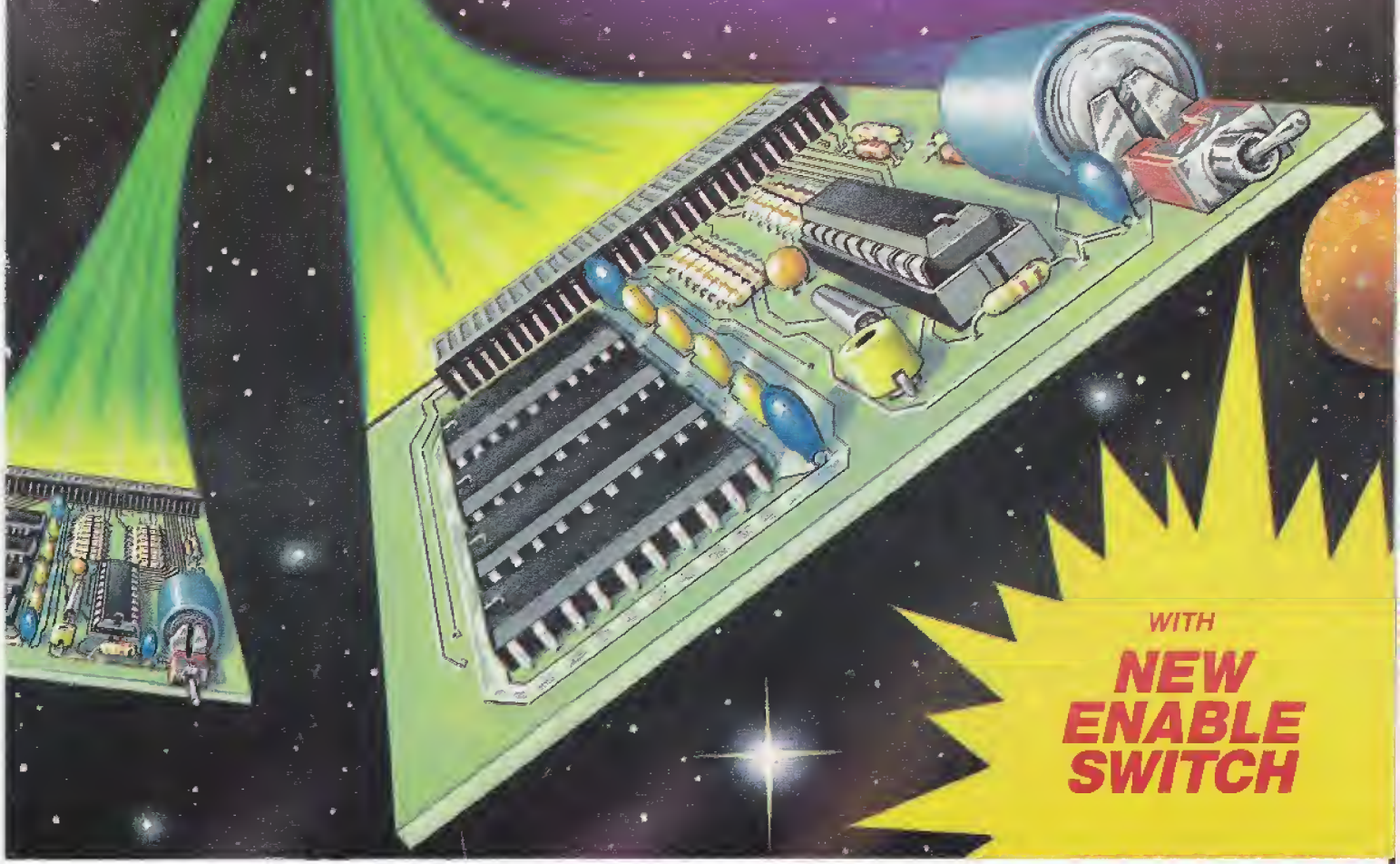


WITH

NEW ENABLE SWITCH

Computer games...

the first step to computer awareness

Alexander lambert has written much about the Amiga - his articles will be appearing in these pages over coming months, and indeed have already been published in our Amiga Annual. Here, Alex takes a very personal and somewhat unusual look at the benefits of the Amiga, along with some words to parents on how to view those early game playing days.

THE OTHER DAY my next door neighbour dropped in for a cup of tea and a chat. During our conversation it was apparent my neighbour was a little distressed. It seems she was very unhappy because the Commodore 64 she bought for her two young boys is used only for playing COMPUTER GAMES (gasp gulp horror).

As the local computer freak responsible for her situation, (I suggested she buy the computer) she insinuated it was my fault, and I should rectify the situation as soon as possible. Why should I change anything, I told her, there is no problem to fix. The two boys are aged only 9 and 10 and the computer is doing a very good job of preparing them for their future, "What more could you want?" I asked.

My neighbour gave me one of those looks that would wither six sumo wrestlers and turn them into quaking little jellies. She informed me, rather loudly, that playing computer games is not teaching HER children anything.

Purple Saturn Day

My neighbour, like many other parents, expects her children to use their computer to do homework, study maths, spelling etc and any other subjects related to their schooling. She felt rather cheated because the computer was bought to help her children learn, and not waste their valuable time with computer games. Nothing could be further from the truth, the playing of computer games is very good for children (lets leave us adults out of this—grin--) because as they begin to play any new game, more SKILLS have to be LEARNED to compete with the computer or another opponent.

Just watch your children play a game on their computer, take notice how fast and exact their reactions and timing are. Each new game has more things your children have to learn before they can even play the game successfully. Even the title of the game is a mini spelling lesson-let's face it, if they can't read the title or the instructions for the game, then they couldn't even hope to play it properly.

For some games, just to be able to understand the instructions is an accomplishment in itself.

If you feel your children aren't learning from their computer, then go out and buy your children a new computer game, preferably one they continue to drop enormous hints for. Now sit back and watch how quickly the game is mastered. The spelling, coordination, logic, intuition, and concentration needed to play that game is possibly far ahead of what you or I could hope to do.

You wanted your children to get used to the fact that computers are part of their daily lives, games are part of that realisation, and most children who own a computer will eventually treat their machine as a helpful and productive tool.

Now my neighbour looks at the computer in a different light, she even went out and bought a new game for her two boys and sat back watching with enjoyment, the talents and skills her boys displayed as they played their new game.

In time the two boys will want to put their computer to other uses. Let them make that choice in their own time, no force is appreciated or necessary.

The next complaint from parents could be about their children insisting how they desperately need a disk drive and a printer. Well, how can you expect them to do all their homework without a disk drive or a good printer to dump out those assignments? Perhaps the answer is to take away their computer and let them find something else less expensive or more educational to entertain them, like watching violence on TV or frequenting video-game parlours.

Better still, they could hang out on street corners with their mates, planning and scheming devious things to occupy their bored minds.

You may think because I own and use an Amiga I am biased, well you are quite correct, I am very biased in favour of owning and using computers as tools or learning aids.

My computer is more to me than a plastic box full of circuit boards and mysterious little black chips. It's a complete home entertainment centre, plus the greatest teacher I have ever had the pleasure of knowing. Max (yes my computer has a name) never gets angry or frustrated with me, he has infinite patience and great wisdom, which is always available to me at the press of a button.

As a child, my days at school were

filled with anger and much misplaced aggression. I suffered at the hands of the teachers who mistakenly thought I misspelled words purposely, just to upset them and spoil their day. The problem was I had dyslexia, but at that time the disability was unknown and although I tried very hard to spell the words correctly and make the teachers pleased with me, I just could not see the words or letters in my mind's eye to put them on paper.

I bought my Amiga in 1986 and since then I haven't stopped learning, perhaps it's because there is no pressure or aggression directed at me. With the word processor I use, it just beeps and flashes the screen if I misspell a word, no hysteria, no tantrums and no rapped knuckles.

With the press of a button the correct word is displayed in a window on the monitor, and I can enter it into my text, then continue on with my writing without any drama. The wonderful thing is to have the same word corrected by the computer enough times to eventually shake up my subconscious and make it commit the word to memory.

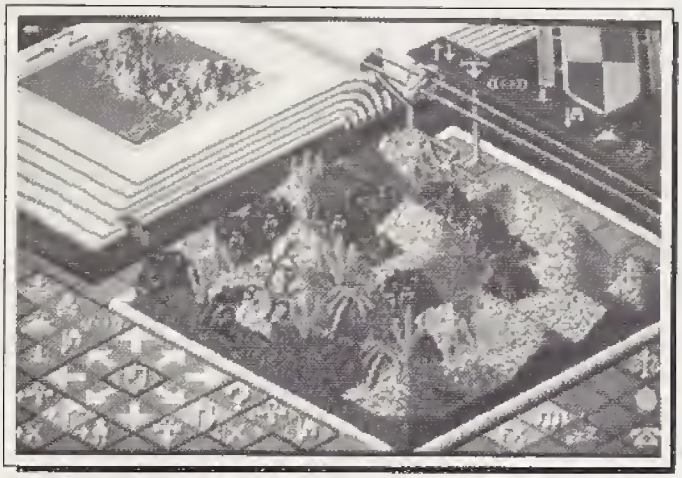
Sometimes when I am writing an article, the realisation slowly dawns on me that I have written a complete page and made no spelling mistakes at all, yet I am using words that for years I could not spell correctly. For readers with dyslexia, or those parents with dyslexic children, I can personally recommend the Amiga to help overcome their problem. The ability to change the colour on the monitor seems to help, much like those magical coloured glasses claimed by some to help dyslexic people.

I started off using my computer only to play GAMES, because I firmly believed I could not write. There were times when other people filled in a cheques for me as I could not write them out for myself, sometimes I would ruin four or five cheques before I got one right.

After the novelty of the games wore off I started to experiment with writing letters on the computer and actually began to enjoy it. I used a typing tutor to teach me to touch type and with the help of a good word processor I found I could write anything I wanted. The wonderful world of learning was opened for me - by a computer. Neighbours now ask me to write and print their important letters for them, for some reason they feel the letters would look better if I wrote them.

Can you imagine how good that can feel?

So do yourself and your children a favour, give the computer a fair go, you will be amply rewarded. YES I am biased I love my computer, my teacher, my friend. ❑



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Watch out, pirate

by Andrew Farrell

YOU'VE PROBABLY seen the ads in your local newspaper. In Sydney, even the *Sydney Morning Herald* has in the past carried pirate advertising, and the *Trading Post* was notorious for it. However, the days of such tarnished promotions are numbered. On January 22nd, the *Sydney Morning Herald* Computer Section reported the successful "scuttling" of a pirate.

This move will no doubt pave the way for similar arrests and as expected it has sent a flurry of activity throughout the pirate networks and cracker hide-outs. Indeed, such people have every reason to be concerned - especially those involved in the selling of pirated software.

The latest stage of the pirate saga began when an advertisement offering latest Amiga titles for a mere $5 a disk was brought to the attention of the Fraud and General Crimes division of the Australian Federal Police's Goulburn Street offices.

Thinking it unlikely that "latest titles" would sell for $5, an undercover investigation was launched. A raid ensued, following some initial investigations which established pirated software was for sale. The 17 year old pirate is alleged to have made between $200 and $300 dollars a day selling disks containing wordprocessors, games and whatever else took your fancy - just check the catalogue!

Under the Copyright Act, it is possible to be fined up to $500 for each disk copied. Hopefully, this will help deter others who continue to sell disks to which they hold no claim of ownership.

At the bottom of this rotten barrel are the crackers. They do it for kicks, for a challenge, to become famous. But they also do it so that software can be "mass spread". They love to see their name in lights, and getting their cracked software in the hands of every Amiga owner is their own small way of feeling famous.

Smart as they may be - the police have also noted the names and postal addresses of groups which are located in Australia. What will be the result of further investigations? Bands like Quartex, DMA, and Australian Crackers United may have to take a much lower profile.

What do you think about piracy? We would like to hear from crackers out there as to why they do it? How do they justify it?

People who wouldn't steal a Mars bar from a supermarket, gladly exchange software worth hundreds of dollars. The most often used excuse is - "it's too expensive".

Well, since when did that justify theft? Do you steal Italian leather shoes from Grace Bros just because they're too expensive? Amiga owners Australia wide need to be alert to pirates who are abusing the system and making big money on the side using other people's work.

We are starting to receive better support in Australia from large software publishers - but we still have a bad image problem as one of the worst pirate countries in the world. Let's hope that can improve! ❑

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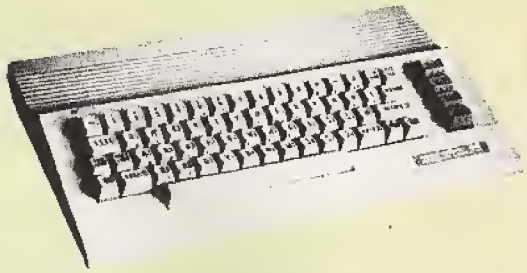

by Eric Holroyd

This simply brilliant cartridge system turns the Commodore 64 into a multi-tasking work station where you can switch from a running program to a variety of useful "productivity" features and back again to resume where you left off.

THE GREAT MULTITUDE of satisfied 64 owners who are quite happy to keep their familiar computer for both games use and serious work will be delighted with the Partner's increased benefits.

Put Partner 64 in the cartridge slot and it'll just sit there apparently doing nothing until you press its button. It'll then display a 9-choice menu to offer: Appointments Calendar, Memo Pad, Address List, Phone List, Calculator, Print Screen, SwiftDOS, Swiftlock, and Setup. These features are selected by number and when you're finished the Left Arrow key returns you to your running program.

Swiftload is Timeworks' own fast load system which speeds up the loading of files and programs from disk and which is automatically activated when you switch on with the cartridge in place. Press C=/D (hold down the Commodore key and press 'D') when the Partner menu is on screen to disable it if you find a program with its own fast loader that is incompatible with Swiftload.

Setup

● The first thing to do with your new Partner is to run the Setup program from its menu. This lets you define printer features such as Line Feed (Y/N), ASCII characters (Y/N) and Label Spacing (yes it prints mailing labels too!). Then you set up the disk drive number for Loading and Saving your Partner data. This is where two-drive owners really feel the benefit as drive 9 can be the Partner data drive and you'd simply leave the data disk in that drive whilst you play *Elite* (or whatever) with its disk in drive 8. One-drive owners will need to take out the original program disk to insert the data disk to use Partner's functions. Modem users are catered for too and can put their particular unit's settings into the Partner setup file before saving it.

With the cartridge in place you have the option to use Timeworks' SwiftDOS system of "shorthand commands". These are simple "initial" commands such as 'New' which is used as 'N:Diskname,ID' for a full disk format (instead of the original Commodore DOS command of 'Open1,8,15,"N:diskname,ID":Close 1') so it saves a fair bit of typing.

File commands include: (C)opy, (R)ename, (S)cratch and there are others to (I)nitialize the drive and (V)alidate a disk. Then there are 'user definable' commands, which are preceded by 'p/', to use features peculiar to your printer such as Emphasised text. To do that on an Epson printer you'd enter 'p/27,69'. This is very useful as many of the functions give you a printout to carry around and you may want to have it done in condensed print for example.

Appointment Calender

● All busy people use some sort of diary to organise their daily schedules and the Partner's Appointment Calendar can replace ordinary diaries to a large degree. It displays a screen divided into three sections. There's "Key Tasks", a "To Do List" and "Appointments". There are about five screen-width lines in each section to let you enter in the relevant things for that day and a press of the F7 key gives you a hard copy to have on the desk or carry in your pocket if going out.

If you don't manage to do all the things you've set down for today you can carry them over to tomorrow's list. What you do is go to tomorrow's page and press F1 to "transfer previous day". Brilliant! There are many times when I personally don't manage to get it all done in the day and need to make a note to do it tomorrow so this feature is a good one for me (and I'll bet many others too!)

Memo Pad

● Memo Pad is a sort of simple word processor and I found it useful in so many ways. Here's one: Let's imagine that you're playing *Elite* and are at a crucial stage when the phone rings and it's someone reminding you that you'd promised to mail a list of phone numbers. Here's what you do: Press the button on the Partner cartridge, select Phone List, press F3 to load the Phone List file from disk, press F7 to print the list. Press Left Arrow to return to the menu then select Memo Pad, press F4 to turn on Typewriter mode, position an envelope in the printer and type the address. In this mode, every time you press the Return key that line is printed. A terrific idea, and it works extremely well, turning your 64 into a typewriter for small jobs just such as that. Press the Left Arrow key to exit Memo Pad and again to exit Partner and you're back where you left off in your game. The whole job would have taken about the same time as it took to read the last couple of paragraphs.

Another great use for the Memo Pad is to write Help Screens for other programs. These are then stored on the data disk ready to be called up when required. A good example is to make up a screen of *Superbase* commands and save it to disk.

(continued on page 46)

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Next time you're running *Superbase* you can press the Partner button and check up on the commands if you can't remember them. Get a fresh printout too. Other examples might be the helicopter controls for *Gunship* or the Quedex keys. The ideas are endless.

Address and Phone Lists

● Most of us have teledexes or address books to keep track of addresses and phone numbers. Partner has two separate functions for this, one stores Names and Addresses and the other one Names and Phone numbers.

'Address List' stores details in Name, Address, City, State, Zip and Phone number format whilst 'Phone List' stores it in Name, Phone number and Memo (one line of text) format.

I liked the idea of the Memo line in the Phone List as I've used that a lot in my low-tech pencil and paper listings. I like to put in something like 'Joe Smith, (03)440-521, Bulk paper supplies'.

In both Address and Phone Lists there are sorting and searching functions to let you locate specific details. It's quite quick and the display scrolls through the file to find want you want and then point to it with a flashing cursor. As I said before, you can get hard copies of these Lists with the F7 key.

When storing Partner data files you're asked to supply a unique name for each one and I thought it would be a great idea to store a separate Address file for my Christmas card list instead of sorting through the master list of many hundreds of names. It would be easy to do and could be saved under its own name and edited when necessary. I could even have lists of Business contacts stored separately from Friends and Relatives etc.

An Auto Dialling feature is included for modem users, although not having a modem I don't know how (or if) it works. I've read somewhere that such features in programs originating in the USA won't work here due to a difference in the way the phone system works so you'd have to check with the distributors to see if that bit is compatible here. If it's not you'd just have to dial the numbers manually (or digitally to be more specific!).

There's a very functional Calculator built-in which has Add, Subtract, Divide, Multiply and Raise to a Power, plus Memory store and recall.

It may be used like a real adding machine with printout facilities by simply pressing F7 to give what Timeworks call a "Paper Tape" function. It works well and again the printout is a benefit.

Sometimes it's useful to get a printout of the text screen from another program and Partner lets you do this easily too. With the relevant display on screen, press the button and press number 6 from the menu. The text is then sent straight to the printer. It won't do graphics, but if you have a printer such as my Star NX-10 with front panel controls you can set NLQ, Bold, or Condensed etc right there to get the kind of printout you want.

If you're working with a database and have "sensitive" information to which you don't want others to have access, then use the Swiftlock feature to set a personal code of up to five characters as a "password". The computer keyboard will then be disabled until the proper password is entered and so prevents anyone else from using it.

In all the functions where you enter data there are various editing features just as in regular word processors. Inserting and deleting of lines, reformatting of paragraphs, moving around with the cursor keys etc are included. The C= key is used as the "Identifier" for various commands and I was gratified to see that Insert Mode is available and is toggled with C=/I. Very useful. All relative commands are listed in an appendix in the manual and I found those pages very useful indeed.

I'd mentioned mailing labels above and I found that Partner does a good job on single tractor feed labels. The excellent manual shows how to set up the Label Spacing (0-9) with a simple formula and your labels can be printed with data straight from the Address List. If you want to make labels such as "Do Not Bend" then use the Memo Pad and print them from that. I like my mailing labels printed in Bold and have adjusted the Partner Setup to do that with 'p/27,71,47' as shown in the Star NX-10 manual.

C-128 users can only use Partner 64 with the computer in 64 mode but, there is a Partner 128 too which operates in full 128 mode. I'd dearly love to have one for my own 128 system and be able to use Partner's features there too. Unfortunately, Dataflow seems to be only handling Timeworks' C-64 range at present, but I suppose if enough 128 users were to write or phone them to say they're interested then they may decide to distribute the C-128 range too.

All in all I believe Partner 64 to be a very useful addition to the C-64 range and one which I'd recommend most strongly. By the way, it's compatible with *GEOS* too so users of that fine operating system can virtually have a mini Mac, particularly if they've bought a mouse to point and select with.

● **Best points:** General ease of operation.

Printouts from almost any function.

● **Worst point:** Usage of "Zip Code" in the address book. I don't think it would be too hard to make a specific version for Europe and Australia to say "Post Code" instead. ❑

An introduction to Multi-tasking

by Andrew Leniart

IF YOU ARE fairly well versed in the capabilities of the Amiga, then you will probably not get much value out of this type of article. If however, you happen to be a new user and are still very much in the learning stages, you may not have a clear understanding of what this multitasking caper is all about. Should this be the case, then read on and I shall endeavor to enlighten you on the subject.

One major difference between the Amiga computer and, say, an IBM PC clone is the Amiga's ability to multitask! (Price is also a major difference, but that's another story!) Most people know that the Amiga can multitask, but do they really understand what it means?

What is multitasking?

● The best way to understand exactly what is meant by the term is to look at something that you can relate to in real life. Let's use "Fred" as the name of the person that will star in our example:

"Every morning, Fred gets up at 6am to get ready for work. As soon as Fred rises, he goes into the kitchen and puts the kettle on to boil while he goes and has a shower. After showering, Fred makes his morning cup of coffee and sits down to drink it while reading the morning paper at the kitchen table. Being a highly efficient type of character, Fred also saves time by putting on his socks and shoes while reading."

Now in our example of Fred, we saw a classic case of a human performing the basic principles of multitasking. Let's analyze it. Rather than waiting for the kettle to boil, Fred showers while it is heating up. This saves time. After showering, Fred drinks his coffee, reads his paper and also finishes dressing all at the same time. This also saves time. Fred is Multitasking! Now, let's apply this knowledge to some basic operations on our computer.

Assume that you have got Workbench on your screen as well as a text editor running such as Qed (available on PD) and you are working on an article you plan to contribute to ACAR. Now if you wanted to know what time it was at any given time, you could either get up and have a look at a clock somewhere in the house, (you don't own a watch!) or have a look at the computer clock that's on your WB disk. As all the clocks in your house have suddenly broken down, your only option is the computer. (Far fetched I know, but let's not forget this is strictly hypothetical!) One way to achieve this task would be to quit the text editor, go to WB and click on the clock icon to bring up the clock and see the time. Then you would need to reload the text editor to continue with your work. If however you were to utilize the Amiga's multitasking capabilities, what you could have done is this: Before starting work with the text editor, click on the clock icon in WB and leave it running. Then open your editor and commence work. So, if you need to know the time now, all you need do is look behind the editor's window to see the clock or use the front and back gadgets to bring the clock to the front! This is a very simple example of the Amiga multitasking. Two programs running at the same time, the Clock and the Editor!

As another example, try doing the following exercise: Open up a CLI from workbench and then type in "NewCLI" without the quotes. This results in another CLI opening up. Continue doing the above and you will find that the Amiga will keep opening up new CLI's until you run out of system memory! Once again, the Amiga is multitasking.

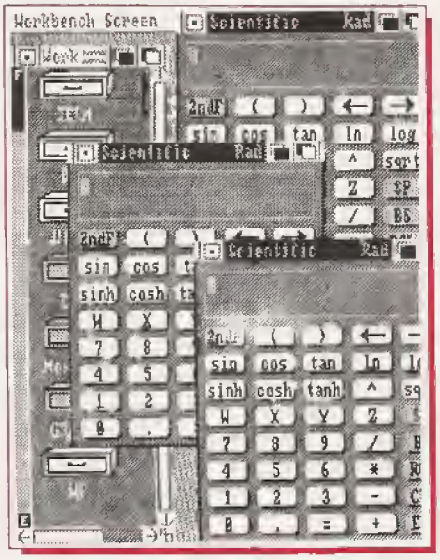
So now you should have a basic idea of what the term Multitasking means. As I said before, the example above is but a very simple one. The Amiga is quite a powerful beast and is capable of performing considerably bigger and better things than running a clock and an editor simultaneously. Most times, you are limited only by the amount of memory which you have in your system, so in theory, you could have an unlimited number of applications operating all at the same time. There are limitations however, as well as things you should try to avoid doing when multitasking or you could end up with a visit from the dreaded you know who- "GURU".

Do's and don'ts

● Before we get into some of the do's and don'ts of multitasking, I would like to point out that to get the full benefit of the Amiga's multitasking potential, you will need to familiarize yourself with using the Amiga's CLI. (Command Line Interface). While you can get several programs or demo's to run at the same time with Workbench, you can not start more than one at a time. Try it. When you click on an icon to start a demo for example, you can't do anything else until it's loaded as your pointer turns into a wait pointer (zzz) and won't let you do anything else until the program you clicked on finishes loading. Because of this, the Workbench strictly speaking does not have true multitasking capabilities. Anyway, on with some of the do's and dont's associated with multitasking in the Cli.

The Amiga is famous for its Guru Meditations. Nothing is more frustrating than when you're half way through typing an important document, you suddenly get the message.. "Task held - finish all disk activity...etc etc" It's probably happened to all of us at one time or another. The problem this causes is that if you don't happen to have a free CLI available to enable you to finish all disk activity, you lose your work.

Normally you can't use Workbench to save your document because nine times out of ten, you won't be able to open a NewCLI if you have reached this point.



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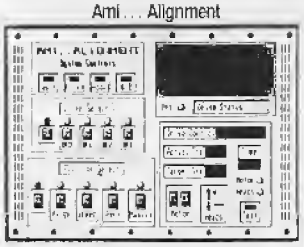

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There is an effective solution to avoiding the problem described above. Always have an open CLI window tucked away in the corner of the screen somewhere, so that if you are faced with this problem, you can use this window to save your work! Alternatively, instal something like PopCli or Qmouse (available freely from PD) onto your work disk and include it in your startup-sequence.

Utilities such as this enable you to open a NewCLI at the press of a couple of keys, so if you're faced with a seemingly hopeless situation, you can start a new CLI to get yourself out of trouble. A very worthy investment of a few bytes of memory. Note that if you get the BIG RED GURU at the top of the screen, not even these utilities will help you out.

There is one other insurance you can invest in that goes by the name of "GOMF", which claims to do wonderful things to old Guru, but I haven't used it myself so I can't really say one way or the other on its effectiveness.

What should you avoid doing? It would be impossible for me to explain all the do's and don'ts involved in multitasking as I am not, and don't profess to be, an expert on the AmigaDos operating system. To learn about multitasking in depth, I recommend that you study some the excellent books available on the subject. One that comes to mind is by Abacus called *AmigaDOS Inside and Out*. What I will do however, is give you a few basic and practical ideas of what to avoid when working with multitasking and give reasons for what I'm saying. The rest is up to you!

When you are in the CLI, you have the ability to make the computer do several tasks at once. For example, you can get it to copy a document to a file in Df0: and at the same time, load another one from df1: This would be no problem. However, you must think in a logical fashion when asking your computer to do more than one thing at a time. Don't, for example, instruct the Amiga to print two documents at the same time. That's obvious!

What's not so obvious is something like this:- Assume you have one drive (Df0:) If you instructed the Amiga to print a document that is sitting in ram: and told it at the same time to load a program from df0:, then chances are that you would end up with unnecessary wear on your disk drive at best, or at worst, cause a system crash! Why? When you issue a command to print a document, the Amiga reads the system disk for preferences settings and printer drivers etc. If you ask for a program to be loaded at the same time from the same drive, then the result is the disk drive head going crazy as it tries to satisfy both commands at once!

Another practice which should be avoided is starting up more tasks than you have memory to cater for. While this practice does not always end up in disastrous results, it should be avoided nevertheless. Basically, when using the multitasking abilities of your Amiga, try to think about what will happen before you issue your commands. Most times, if you think about it in a logical fashion, you won't end up in any trouble at all.

Above all though, don't be put off by some of the complications of utilizing your computer's capabilities. Spend the time to learn about what you can do with the Amiga and find out the correct way of doing it. You have at your disposal a powerful machine which when mastered, will save you time and effort with a minimum of fuss. So play with its capabilities, experiment with them and have fun, for that's what home computing is all about... learning and having fun ! ❑

Let there be Colour

C64/C128 Colour, Graphics and Sound

by Greg Perry

WELCOME TO THE first in a series of articles on getting the most out of the C64's colour, graphics and sound capabilities. We assume you already have a basic understanding of programming - and now you're ready for something a little meatier. This is it!

Simple colour

● The C64 can produce sixteen different colours. Any combination of these may be selected for the border, screen, or character colours. (Screen colour is often referred to as background colour.) However, within this range, many combinations will not be suitable for the brand of TV or monitor you use.

The foreground colour of a printed character can be selected in both direct and program modes by pressing either the CTRL (for "primary colours") or the C= key (for "mixed colours") followed by one of the COLOUR keys (keys 1-8).

This operation may also be done in two other ways:

a. PRINT CHR$(X) where X is the corresponding Commodore ASCII code. The standard character colour on power up is light blue [CHR$(154)].

b. POKE 646,X where memory location 646 is the C64's operating system pointer to the colour under the cursor, and X is 0-15. The screen or background colour is set with POKE 53281,X and the border colour is set with POKE 53280,X where X is a value 0-15. These colour values are the corresponding Colour key face value less one for CTRL and Colour key combinations, and the key value plus 7 for the C= and Colour keys. For example, X = 5 sets colour to green [GRN] and X = 9 sets colour to brown [<WHT>].

Because of the electrical connections in the C64's screen and border colour registers, where bits 7-4 are always set to 1, a PEEK of these locations will return the colour value plus 240. RUN/STOP and RESTORE resets all the colours back to standard. Some combinations of screen and character colours are not usable.

Exercise

● Construct your own table using the following program to decide on which combinations work best on your TV or monitor.

Colour test

```
10 REM (C) GREG PERRY, BRISBANE 1984
100 REM Colour TEST
110 PRINT "[CLR,WHT]Colour
[SPACE6]TEXT"
120 FOR I=65 TO 65+15
130 POKE 646,I AND 15
140 PRINT I AND 15; TAB(10);
150 FOR J=10 TO 38
160 PRINT CHR$(I);
170 NEXT : PRINT : NEXT
180 FOR I=0 TO 15: POKE 53281,I
190 POKE 214,21: PRINT
200 PRINT "[WHT]SCREEN[SPACE]Colour
[SPACE]NO[SPACE]";I
210 PRINT "PRESS[SPACE]SPACE
[SPACE]FOR[SPACE]NEXT"
220 GET A$: IF A$="" THEN 220
230 NEXT
240 POKE 53281,14
```

Also remember that some computer users may be colour-blind. Turn down the colour controls on your set (to black and white) and see if your "preferred mix" of colours is still readable.

Changes to character, screen, and border colours can be done from within a program. To run through the total combination on screen and border colours, enter and run the following:-

Border and screen colours

```
10 REM (C) GREG PERRY, BRISBANE,1984
100 REM BORDER AND SCREEN ColourS
110 FOR B=0 TO 15
120 POKE 53280,B: REM BORDER
130 FOR S=0 TO 15
140 POKE 53281,S: REM SCREEN
150 FOR K=1 TO 500: NEXT : REM TIMING
160 PRINT "[CLR]" TAB(12)"[WHT]BORDER
[SPACE]SCREEN[SPACE]ColourS"
170 PRINT : PRINT TAB(12)"BORDER
[SPACE]Colour[SPACE]=[SPACE]";B
180 PRINT TAB(12)"SCREEN[SPACE]Colour
[SPACE]=[SPACE]";S
190 NEXT S,B
```

Changes in border and screen colours are useful to illustrate some special feature. Try the following possibilities:

1. Border (or Screen) to RED to indicate an error condition.

2. Border to yellow to indicate a delay while the program performs some operation.

3. "Eliminate" the border by using the same colour as the screen.

4. Flash either screen or border between two colours.

5. Select different border colours for different sections of a program.

Warning: a few selective colour changes highlight a feature, too many often destroy it. Let's program one of these options: indicate an error by flashing the border between two colours. When changing the border colour, it is advisable to save the original border colour so it may be reset at the end of the routine. This is done by the PEEK in Line 120. The original border colour is reset with the POKE in Line 200

Error border

```
10 REM (C) GREG PERRY, BRISBANE,1984
100 REM ERROR BORDER FLASH
110 BC=53280
120 X=PEEK (BC)
130 PRINT "[HOME]"; TAB(17)"[BLK]ERROR
[<BLU>]"
140 FOR I=1 TO 10
150 POKE BC,2: REM BORDER TO RED
160 FOR J=1 TO 50: NEXT : REM WAIT
170 POKE BC,10: REM BORDER TO
LT.RED
180 FOR J=1 TO 50: NEXT
190 NEXT
200 POKE BC,X: PRINT "[HOME]"; TAB(17)"
[SPACE5]"
```

Using a variable for the register location in Line 110 is more efficient, making program modifications easier. Most programs in this book will use this technique.

Exercise

● Modify the program to flash the screen instead of the border. Change BC to screen colour register 53281.

Exercise

● Modify the program to move

(continued on page 52)

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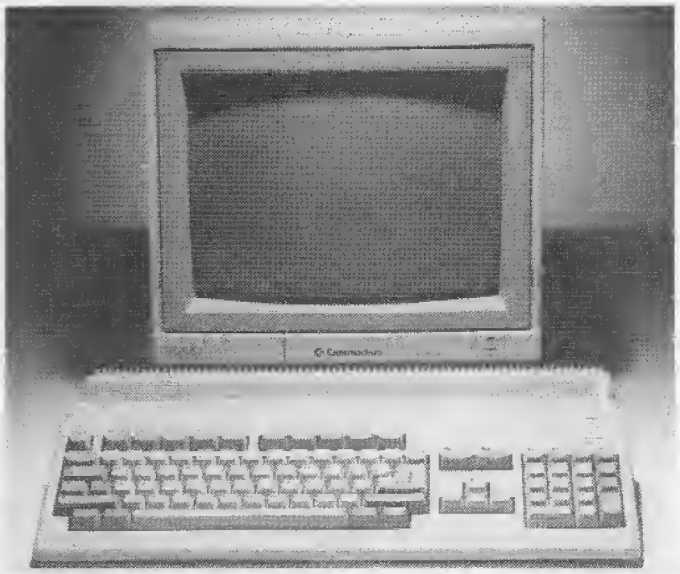

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through a range of colours (say four) instead of the two above. Character colours can be programmed by in one the three ways discussed above. However the most versatile method is by POKEing the memory location which controls the colour of the character under the cursor.

POKE 646,X where X = 0-15

This is the most direct method which allows changes in the character colours to be programmed in any sequence, including a random one. The following program produces either stepped or random horizontal bars (horizontal histograms) of random length. Notice how the current character colour is first saved in X then reset at the end of the program (Lines 120 and 220).

Colour Histogram

● Line 180 uses C=I AND 15. This ensures that C is always a value between 0 and 15. (See Chapter 1.5)

Exercise

● Add a border colour change for each change of character colour Random character colours can be used to print multi-colour messages, but care is required so that the screen and character colours are not the same, in which case the character would be invisible. This can be checked from location 647, the "current background colour under cursor". This is a better matching location for 646 than 53281 (where bits 7-4 are set).

Program: Colour MESSAGE

```
10 REM  (C) GREG PERRY, BRISBANE, 1984
100 REM  RANDOM Colour MESSAGE
110 X=PEEK (646):SC=PEEK (647)
120 PRINT "[CLR,SPACE]Colour [SPACE]MESSAGE"
130 INPUT "ENTER[SPACE]MESSAGE";A$
140 PRINT "[DOWN]THIS[SPACE]IS [SPACE]MESSAGE[SPACE]IN [SPACE]RANDOM [SPACE]ColourS[DOWN3]"
150 FOR I=1 TO LEN (A$)
160 C=INT ( RND (0)*16): IF C=SC THEN 160
170 POKE 646,C
180 PRINT MID$(A$,I,1);: FOR J=1 TO 100: NEXT
190 NEXT : POKE 646,X
```

Note the colour check in Line 160. This location, 647, cannot be usefully POKEd.

Exercise: Change the character colour to screen colour, write a hidden message, then move the cursor around the screen to find and read it.

Extended Colour Mode (ECM)

● As we have seen above, it is possible to have 16 different character colours on the screen at once, but only one background colour can be used. A feature of the C64 is the Extended Colour Mode (called ECM by Commodore). This allows up to four background colours to be used on different areas of the screen at once. Unfortunately, there is a price to pay for this extra facility: the character set is limited to 64 characters, which only include the alphabet, numbers and symbols, no graphics. Within a total character set of 256 characters, this provides four equivalent character sets but each with a different background colour.

When ECM is enabled, the background colour is selected by

a. the background colour register (No 0-3)

b. the type of character used.

Each character code occupies one byte of 8 bits. But in ECM with a limited set of 64 characters, only bits 0-5 are needed to contain this information. The left-most two bits, bits 7 and 6, can be used to select one of four different background colours. Each combination of bits 7 and 6 refers to a specific background colour register. This is shown in the following table.

Character Set No	Type	Char Code	Bits 7 6	Register Location	No
1	normal	0-63	0 0	53281	0
2	shifted	64-127	0 1	53282	1
3	reverse	128-191	1 0	53283	2
4	shifted reverse	192-255	1 1	53284	3

This table requires explanation. In ECM all characters, no matter how entered, appear on the screen as one of the first 64 characters from the screen display code table, codes 0-63. (User Guide page 132, Reference Guide page 376, conversion formulae Chapter 3.2) Characters entered in the normal way without the use of the shift key appear with the usual background colour.

Characters entered using the shift key appear on background colour 1. Any characters preceded by first setting the display to REVERSE ON [RVS] have background colour 2. Shifted characters preceded by REVERSE ON have background colour 3. ECM is enabled by setting bit 6 of location 53265 by

Enable ECM : POKE 53265,PEEK (53265) OR 64

Disable ECM : POKE 53265,PEEK (53265) AND 191

NOTE : if location 53265 is not otherwise used in the program it can be set more simply by

Enable POKE 53265,91

Disable POKE 53265,27

The following program gives a simple demonstration of ECM Program : ECM DEMO

```
10 REM  (C) GREG PERRY, BRISBANE 1984
100 REM  EXTENDED Colour MODE
110 PRINT "[CLR]"; TAB(5)"[BLK]EXTENDED [SPACE]Colour[SPACE]MODE"
120 FOR I=1 TO 10: PRINT "[SPACE]";: FOR J=1 TO 20: PRINT "[SHSPACE]";: NEXT
130 FOR J=1 TO 18: PRINT "[RVS,SPACE]";: NEXT : PRINT
140 NEXT
150 FOR I=1 TO 10: PRINT "[SPACE]";: FOR J=1 TO 38: PRINT "[RVS,SHSPACE]";: NEXT : PRINT : NEXT
160 PRINT "[HOME,DOWN4]"
170 PRINT TAB(5)"REGISTER"; TAB (25)"REGISTER"
180 PRINT TAB(6)"53282"; TAB(26)"53283"
190 PRINT "[DOWN6]"
200 PRINT TAB(15)"REGISTER"
210 PRINT TAB(16)"53284"
220 PRINT TAB(13)"[DOWN6]REGISTER [SPACE]53281"
230 PRINT TAB(10)"PRESS[SPACE]SPACE [SPACE]Colour[SPACE]CHANGE"
240 POKE 53265,27+64
250 FOR K=0 TO 3
260 R%=RND (0)*15+.5
270 POKE 53281+K,R%
280 FOR J=1 TO 100: NEXT
290 GET A$: IF A$="" THEN 290
300 NEXT : GOTO 250
```

NOTE: spaces inside [ ] in Lines 120 and 150 are SHIFTED spaces Run the program and hold down the space bar; the four colour registers are successively changed to random colours. Press the STOP key and list the program. Notice the different appearance of all the cursor control characters in Lines 160, 190 and 220. While still in ECM, type a range of different characters to see the different effects. RUN/STOP RESTORE resets to normal.

Exercise: This program uses only a space character in each of the four character types. Select some other character(s), one in each character type.

Exercise: Write a program to "hide" a message on the screen which will be revealed ONLY in ECM.

ECM is very useful for games or highlighting an area of the screen, but remember, NO GRAPHICS CHARACTERS can be displayed. Add an ECM routine to a program of your own. The main advantage with this extended colour facility, as seen from above program, is that ONE POKE command to the appropriate background colour register can instantly change the colour of a large or special area of the screen. ❑

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Australian developers need your support

by Tim Strachan

WE OFTEN FORGET, amongst the hyped-up, over-advertised overseas software flood, that here in Australia we have many talented software developers, sometimes working on a shoestring budget. Their work may be commercial, public domain or shareware, and a couple of them are better known overseas than here, a sad situation.

Like writers everywhere, these people have the odds stacked against them when starting out - the old Catch-22 applies, whereby no software publisher will give them a chance because they are unknown, and as a result they can't become known. So they struggle on, and by virtue of perseverance and even stubbornness, stay in the game until they get a break, or they become too good to be ignored. Or they give it up and get a "real" job.

There are other difficulties to overcome - you need to keep up with the hardware and software you need as a developer, and that means money, often quite a lot of it. You need support from the manufacturers of the machine in question, in this case Commodore, in the form of information on the latest hardware and software specifications and updates, help with promotion to dealers, and a lot more. There has been some inconsistency on this front, as developers here are expected to get their support from the U.S. main office at significant cost.

A worthy initiative for Commodore would be to set up a proper Developers' Support section here in Australia, run by someone who knows the scene intimately. I know of people in the past who have given up in disgust some fairly exciting developments as a result of apathy from the company which would have most to gain by supporting them. However, it must be added that Commodore has been taking steps to become more professional in this and other areas lately.

Most of the people mentioned below have written or are writing public domain software and/or shareware. For anyone unaware of these terms, public domain or freeware is software written for anyone else to use in any way they see fit, and cannot be charged for, except to cover the costs of disks and copying.

Shareware is a good concept, in that the writer makes the software freely available through your local user group or supplier of Public Domain software, but retains all rights and suggests that if you find the product useful you send him or her a small cash donation, usually entitling you to free updates to the software and other benefits.

This is a good idea, since the users get to see if the software is suitable, and if so, they send their money in. It should be stressed that you should support the concept, because otherwise this fine source of software may well dry up. Sometimes public domain software is better than commercial equivalents, and the Amiga is well-known for having a public domain software base better in quality than other machines.

What becomes obvious from the experiences of the developers listed below is that there is a lack of good ethical software publishers on the local scene. In many cases, these developers would love to have access to a publisher who understands their problems and is willing to nurture a home-grown software industry, meaning reasonable returns and conditions for the effort the writers have put in.

So who are these unsung heroes of the Amiga software scene? I'll mention some of them here and what they've been up to, but there are many others around that also deserve mention. In fact, if you are such a person, or know one, please write to Megadisc, P O Box 759, Crows Nest, Sydney 2065, or call me on (02) 9593692 and let me know who they are - alternatively, contact the editor of this magazine on (02) 817 0011.

● PETER NORMAN is probably our most successful commercial Amiga programmer. He wrote *AUDIOMASTER*, a very sophisticated sound manipulation/editing program which was originally put out by Aegis Developments. Recently Aegis was taken over and the rights to the program reverted to Peter, who is

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about to set up distribution from Australia, and has re-written the program with many powerful improvements. Watch your local software shop.

● GREG PERRY and STEVE MCNAMEE are two Brisbane programmers who have been in the Commodore scene for a long time and wrote *GPTERM*, a communications program for the Amiga which covers all you'd ever need, from Viatel to high-speed communications. This pair does have some distribution through the Amiga dealer network, but tend to rely on their own direct mail efforts. Currently, Greg Perry is working to implement a British-made networking system called Amiga-Net. Contact them on (07) 3661402.

● GLEN MCDIARMID has had an international success with his *RESOURCE* Disassembler program, probably the most powerful program of its type anywhere. Glen formed links with the Puzzle Factory in the U.S., who are now handling distribution for him. He devised an ingenious copy-protection system to combat the inevitable pirating and is working on further developments in Assembly language, his forte. He can be contacted on (07) 8122963.

● NIC WILSON is very well-known in the Amiga community for a great variety of programs, many of them public domain, and some of them commercial. He has been an untiring contributor to Megadisc, and his *NOVIRUS* program which went commercial about eight months ago, has saved many an infected disk. Nic has some dealer distribution, but again with the problems associated in developing a dealer network, has opted for direct-mail principally. He has become well-known overseas too, through his Fish Disk releases. Commodore should take him on as an anti-viral consultant, among other things. He can be contacted on (076) 358539.

● JON POTTER is also well-known, both here and overseas, for a wide variety of programs, especially his utility programs. He has also been a mainstay of the anti-viral forces in this country with his excellent *ZEROVIRUS* program, saving the sanity of many an Amiga user. He is competent in Basic, C and assembler, and so far has released all his programs as either public domain or shareware, and deserves to be supported. He is currently partnering Andrew Wilson in the Phoenix Board A1000 resuscitator project, potentially one of the best developments to come along in a long time. Jon can be contacted on (07) 2932788.

● GRAEME WHITTLE is a special case, being an artist who discovered the Amiga in the early days, and became a master of the graphic capabilities of the machine. He quickly became expert in *DELUXE PAINT* and *SCULPT/ANIMATE 4D* and other programs, in paint and animation, and released a variety of useful products such as Colouring Book disks, *DELUXE PAINT* Help disks, Animations, Australian animals and the HotDisk erotic disk-magazine series.

However, he found that distribution was difficult, compounded with a high level of piracy and had to reduce his output. Such situations call for solid support from both the public and from interested corporations such as Commodore, as the danger now is that there will be nothing more coming from a person who could be a real asset to the Amiga software scene. He can be contacted on: (02) 9771829.

● CRAIG FISHER has released both public domain and shareware programs, recognisable by their compactness and usefulness. Working as a mainframe programmer during the day, he writes for the Amiga by night and has an ambition to do so full-time. But like so many other developers, he is hampered by a lack of time, on the one hand, and by a lack of commercial push on the other.

He also tells me that his experiments in shareware have fallen flat, indicating that the public is either poorly educated in the concept, or just too lazy or tight to send in $15 for his useful applications. Craig's problems indicate that there is a definite need for a local software publisher sympathetic to the position of local writers. Craig can be contacted on (062) 923115.

There are many other writers I could mention here: Mike Simpson, who has written many useful programs in Basic, and adapted public domain software for the Amiga, and placed everything in the public domain; Mike Hansell, who has also kept his KDV anti-virus program up-to-date for years now, and has also released many other useful programs into the public domain (and as shareware) just for the love of it; Sarv Engelhardt, who has written some excellent game and graphic software, published like many other developers, through Megadisc; W. E. Bencke, who has contributed such interesting pieces as his "Evolution" program; Chris and Wayne Hayter, who write excellent utilities in assembler for the fun of it; and there are numerous others.

Perhaps the message of this article is an age-old one - if everyone supports everyone else, then everyone wins. It is worth putting something back in, whether by avoiding piracy in all its forms, or sending in a shareware donation, or even starting up a software publishing house if you have the time, money and interest. The only result can be better software and more of it, and a bunch of developers who are doing what they do best, and enjoying it. ❑

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Questions Beginners Ask

by Tim Strachan

Using requestors

● A requestor is that part of a well-written program which allows you to LOAD or OPEN another file to work on, to save a file for the first time (using SAVE AS, indicating that you must give it a name) or to save a file that has had something added to it (using SAVE).

There are many kinds of requestors, but Version 1.4 of the System software should have a standard requestor that any program can use, thus standardising the way you use it.

The worst kind of requestor is the type that AmigaBasic uses - a small box comes up, in which you're expected to type the name of the file. The problem is that you may not remember where the file is exactly, so you have to hunt through your disk to find out if it's in a sub-directory, and to get the correct spelling, etc. Most good programs are tending to a standard now, in which the requestor is a window with a DRAG BAR, a file list section, and two GADGETS normally called VOLUME or DISK or DRAWER, and FILENAME.

The important thing for a beginner to remember is that you have to realise that the machine is dumb, and needs everything spelled out. So if you are running your word-processor and want to load a file from, say, the external drive, then you have to put in the DRAWER GADGET DF1:, or if the file you want is in a sub-directory called MyLetters on the internal drive, type in DF0:MyLetters.

You'll then see some disk activity after which you should have a listing of the contents of the disk or drawer that you've specified. Then you SELECT the file you want by clicking on it, which will cause it to appear in the FILENAME gadget. Then you click on OK or OPEN and the file should appear on your screen. Some better requestors allow you to open the file by simply double-clicking on the filename in the filename list. The difference between SAVE and SAVE AS: Most programs have these options in one of the menus, and the difference is between saving a file for the first time, and saving a file that already has a name, either because you've already used SAVE AS, or because the file you're working on was loaded into the program by you previously.

Just remember that if you've started a brand new file then the first time you want to save it to disk, you'll have to use the SAVE AS option to give it a name - the requestor will come up and you'll be able to type into the DRAWER gadget the disk and drawer you want to save the file in, and then the name you want to give it should be typed into the FILENAME gadget. Click on OK and you've both given the file a name and saved it. The next time you want to save your work, simply use the SAVE option. ❑

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The Mega Entertainment Section

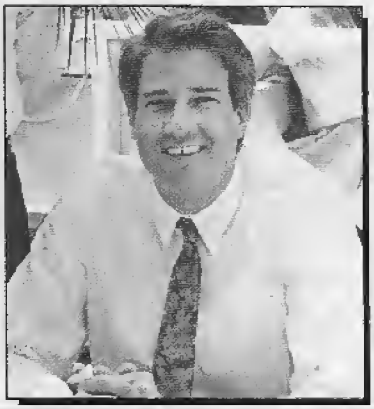
Edited by Phil Campbell

Interview: Broderbund

Phil Campbell speaks to Steven Dunphy, Marketing Vice President of Broderbund.

BRODERBUND IS ONE of the most successful entertainment software labels in the world. Remember *Printshop*? Remember *Carmen Sandiego*? Household words. Today I spoke to **Broderbund's** Steven Dunphy, Vice President (Marketing). Steve's a nice guy - a typical relaxed, confident American type. He's got every reason to be confident, too.

After all, the original *Carmen Sandiego* continues to sell well after 4 years. Hundreds of thousands of copies have been sold. And what about the newest title in the series, *Where In Time Is Carmen Sandiego*? "Well," says Steven, "in October we bought 95,000 copies of the desk encyclopaedia that's packaged with the game. They ran out in December, so we had to order a special print run of 35,000 more!" That's the sort of problem every software company would just love to have.



There are more world beaters on the way, too - *Playroom*, recently released in IBM format, is targeted at the pre-school age group. So far it's selling very well, and there are plans to bring it out on other formats soon. *Where In Australia Is Carmen Sandiego* is still stuck somewhere in the pipeline - "It's been under discussion for a very long time," says Steven, "but there's no definite timetable as yet." The program will be developed locally, and Dataflow, the Australian distributors, are still looking for the right people to write the code. Any takers?

Broderbund work at three distinct levels. There are eight "in-house" programmers working on a number of projects - some still top secret. Among this select group are guys like Gene Portwood and Lauren Elliot, creators of the *Carmen* series. (If you want to know what Gene Portwood looks like, says Steven, take a look at the fierce pig-like Eneg Doowtrop on the title screen of *Shufflepuck Cafe*. We should have known - try spelling the name backwards!)

On the second level are a string of independent developers - often they come to **Broderbund** with a half finished product, the company puts them on contract and arranges packaging and distribution.

Finally, **Broderbund** acts as distributor for a number of smaller software houses like *Maxis*, creators of the famous *Simcity*. They've got some exciting stuff in the pipeline too - watch out for *Robosport* and *Gaia* in the next few months. In *Robosport*, you design and program a robots to do battle in an arena - you can fight against prepackaged foes, or battle it out with robots designed by your friends. *Gaia* goes a stop beyond *Simcity* - this time you control a whole planet, with an ecological theme coming through strongly.

Most of **Broderbund's** development work is done on IBM compatibles. In the USA, over 50% of all software sales are in this format. Dunphy is surprised by the difference between the American and Australian markets, especially by the strong local support for the Amiga. "In the states, the Mac and the Amiga are comparably priced," says Stephen. "The Mac market is getting bigger and bigger. I just can't understand why the Amiga is so cheap out here." Or perhaps why the Mac is so expensive?

There's bad news for Commodore 64 fans, too - "The Commodore 64 is fading quickly," says Dunphy. "It's on its last legs. The amount of product we're able to move is really getting tiny." I guess that's where the rubber hits the road - they're not going to produce the stuff if nobody is going to buy it. So as I've said before, start saving up for that Amiga 500!

Broderbund have dominated the entertainment software market for years. Listening to Steven Dunphy, I'm convinced that things are not going to change for a long time to come. Quality products with a creative edge, well packaged and well marketed - how can they fail? □

That's Entertainment

A round-up of this month's entertainment news and views.

Mindscape C-64 CD pack on the way

● Yes folks, it's really happening. In fact, I've got a pre-release copy in my hot little hands - a gleaming silver compact disk containing 30 games for the Commodore 64. Not exactly hit titles, but all good fun - games like *Red Max*, *Vampire*, *Thunderbolt* and *Cosmonut* to name just a few. Using the CD is simple, just as long as you've got a headphone socket on your CD player or stereo system amplifier. A cable (supplied, of course) runs from the headphone jack to the joystick port of your Commodore 64 - a simple loader program supplied on standard disk and cassette reads the data from the joystick port and loads it into memory. Simply click through the tracks to the one you want, press play, and hey presto! Watch for a full review soon.

Stryx and Bloodmoney from Psygnosis

● *Psygnosis* are famed around the world for producing beautiful games. Beautiful to look at, anyway. Sometimes the gameplay lets them down a little - whether this is true for *Stryx* and *Bloodmoney* remains to be seen. Both these titles arrived too late to be reviewed this

(continued on page 60)

We've got the lot!

AMIGA

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It Came from the Desert	59.95
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month. All I can say is that after five minutes play, I can guarantee that the graphics are great ...

Creature from Actionware

● Another new phaser gun title from Actionware, *Creature* has you blasting away at horrible looking aliens - you are the only space security captain within range, so your job is to clean them up. Walk or ride a space scooter; if you've got a scanner, you can stick your own face on the space captain. How much? $49.95 from Questor.

Ghostbusters II

● Slime those spooks with *Ghostbusters II* - this game is at the top of the English software charts, and by all accounts it's hot! The game programmers have created three individual arcade scenarios, all based closely on the movie script. Distributed by Ozisoft, the Amiga version retails for $49.95, Commodore 64 Cassette is $26.95, disk $35.95.

Chase HQ from Ozisoft

● Here's a hot new title fresh from the arcades - *Chase HQ*. This is said to be the most thrilling 3D Driving game yet - drive a Turbo charged Porsche as you and your partner pursue dangerous criminals through city streets. Sounds great - we'll let you know whether it lives up to the hype in our next issue. Distributed by Ozisoft, the Amiga version is $49.95. Commodore 64 cassette version is $26.95, disk is $35.95. ❑

Letters to the editor

● This month we've got a swag of letters, last month we had hardly any. Want to know why? Simply because lots of our readers send their letters to the wrong address! DO NOT send letters for the Entertainment Section to the main office of the magazine, or they'll get held up. Address your letters as follows:-

Phil Campbell
PO Box 23
Maclean NSW 2463

Dear Sir,

● Re: December Issue Volume 6, No. 12, Page 63

I wish to reply to the comment you made in reply to Mark Healy's letter from Ipswich which is out of context and inflammatory to us Commodore 64 users.

The Commodore 64 market in Australia may be small in comparison to the American market, but in the USA one can purchase a printer for the Commodore 64 for $US59.00. MS-DOS software is available for the 64 so one can run IBM compatible programs and lots of other items not available in Australia (?!?) Laser Printers for the Commodore 64 are also available in the USA from $US698.

Jim Ruhe
who loves his Commodore 64
(Jimboomba)

Ed: Well, there's obviously only one solution for you Jim. Go live in the USA. The rest of us will just have to make do with the situation here in Australia. My remarks in December were not meant to be inflammatory, and I'm a confirmed fan of the Commodore 64 myself - especially as a programmer. We're still offering as much coverage as we can of the old work horse - though we're keen to recruit some more able bodied C-64 reviewers. Any takers?

Dear Sir,

● I would firstly like to thank you for bringing out this excellent magazine.

I also have enclosed some cheats and high scores for your Amiga Hall of Fame.

Matthew Mantle
Gladstone, Qld

Ed: Thanks Matthew - look in the Hall of Fame and you'll find your name listed a number of times. The hints will be very handy - we'll print them over the next couple of months.

Dear Sir,

● I'm just writing to congratulate the Australian distributor Ozisoft. Recently I bought the game *Beach Volley* from a mail-order company. When I tried to boot up, the game appeared faulty and so I filled out the free replacement card and sent it back to Ozisoft (Freepost). Around four or five days later an extremely polite representative rang from the Eastern states informing me that the problem had been rectified and they were sending the package back free of charge. Thanks Ozisoft!

Keir Sooby
Darlington WA

Ed: Thanks for your letter, Keir. It's great to hear good reports of our Australian distributors - keep up the good work, Ozisoft!

Dear Sir,

● I am 10 years old and in *Bubble Bobble* I got 1,200,460 on an Amiga 1000. I have reached level 100 several times. Do you think you have any games like *Bubble Bobble*? Wherever I look there are none like it. By the way, how are you meant to get past the big guy on level 100? I got both of the bottles of lightning power and nothing happened.

Vanessa van der Hayden
Woomera, SA

Ed: Well, Vanessa, if you don't know what to do with the big guy on level 100, I think you've got problems! After all, you're the one at the top of the high score table! If anyone out there can help, drop us a line. As for similar games, you could try Skweek from Pactronics (racing around making blue tiles pink and avoiding cute little nasties) or New Zealand Story from Ozisoft - just as popular as Bubble Bobble, and apparently just as addictive. We'd review it if Ozisoft would send us a copy!

Dear Sir,

● A couple of months ago I purchased a copy of *Daley Thompson's Decathlon* on disk, distributed by Ozisoft. After two days of trying to run the program I decided the disk must be at fault so I returned it to the store and got another copy. Still no joy. It says that after loading the program it will run automatically, but all I get is the first even screen of the 100 metres run. The top man runs to the finish, but the bottom guy, who I take to be Daley Thompson, does nothing. That's as far as I can get the game to go. Am I loading wrong? I have a C128. In the instructions it also says "When day 1 has been completed switch off your machine and repeat the loading procedure for day 2." How do I do this? Switching off my machine means that when I turn it back on I'm in 128 mode. Your help would be greatly appreciated.

Les Quarman
Forrestfield, WA

Ed: First of all, sit back and relax. Let me ask you a few obvious questions. Did you switch into C64 mode (type "GO64" or hold down the Commodore logo key when you turn on) before you tried to load the game? Second, the first event sounds pretty normal to me. The top runner is controlled by the computer - the bottom guy is you, and you'll need to wiggle your joystick back and forth to make him run. Did you try that? Was your joystick plugged in the right socket? Hmmm? Finally, when you power off then switch back on, go through the same procedure to switch into C-64 mode. Some games do this automatically as they auto-boot on the 128, but my guess is you'd best do it yourself - ie, type GO64 to get to the familiar old two tone blue "39811 bytes free" startup screen, and then follow the disk loading instructions from there. Hope this helps! ❑

(continued on page 62)

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Amiga Hints and tips

AMIGA AMIGA AMIGA

● Matthew Mantle from Gladstone, Qld, sent the following goodies - some handy tips and an interesting oddity ...

Silkworm

● When the game starts, hold down the HELP key to start with infinite jeeps and choppers.

Eliminator

● Here are some level passwords -

2. Amoeba
3. Bloop
4. Cheeki
5. Doinok
6. Enigma
7. Flipme
8. Gee Gee
9. Handel
10. Icicle

Arkanoid - Revenge of Doh

● Hold down the left mouse button while the game is loading to reveal the title screen of ROBOCOP!

Scoop! Space Ace solution revealed!

● Yes folks, it's happened already. GEOFF SUTTOR of Deniliquin, NSW, has sent us a full solution to SPACE ACE. We can't print the lot - not yet, anyway, 'cause Questor would skin us alive. But try this for starters:-

Scene 1: Borf flies in on his anti-gravity platform with guns dancing. When he shoots the wall on Dexter's left, go RIGHT behind the rock then go LEFT into the open space again and then go DOWN to duck back behind the rock to safety. More next month! ❑

Commodore 64 hints and tips

● Paul Millward, a regular contributor from Salisbury North, SA, sent a bundle of hints for C64 users. Here's a little sample ... more next month.

Commando

● Load and RESET. Then POKE 14631,0 and SYS 218 for infinite grenades.

Metrocross

● Load and RESET. Then POKE 13501, 234, and POKE 13502,234. SYS 4096 restarts the game with infinite time.

Phobia

● Load and RESET, then POKE 5390,189 and SYS 2172 to restart with infinite lives.

Dominator

● This one is a little unusual. Load, RESET, then POKE 2293, 165, and SYS 2113. Then RESET the machine again, and SYS 2113 to resume play with infinite lives.

NinjaCommando

● Load, RESET, POKE 10457, 173 and SYS 14848 to restart with infinite lives.

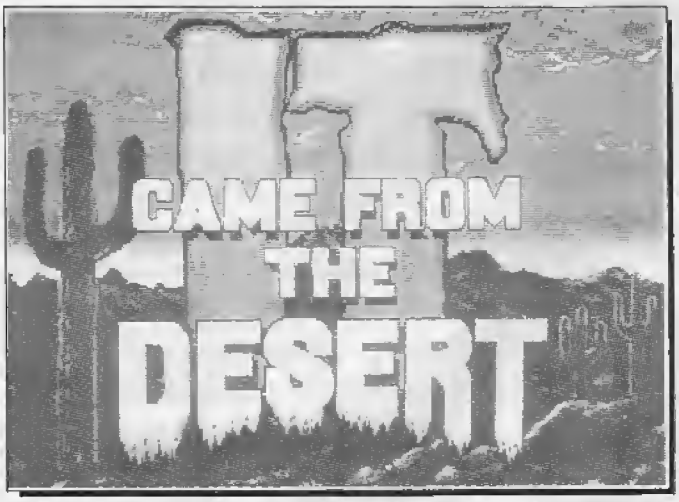
● Sorry folks, we haven't got much room this month. Next month there'll be a huge selection of tricks, hints and tips, but here are a few to keep you going.

Thanks, Paul, and thanks to all who have sent hints and tips. Watch out next month for a huge collection! Keep them rolling in, too - post your hints and tips to PHIL CAMPBELL, PO BOX 23, MACLEAN, NSW 2463. ❑

Amazing Mindscape-Cinemaware Competition

● Yes folks, it's competition time again. This month, Mindscape International are offering three copies of *It Came from the Desert*, their latest Amiga release on the Cinemaware label. You too can fight off giant mutant ants in this movie style epic - the top class graphics and sound effects put you right in the middle of the action.

So how do you enter? Simply list the titles of all the Cinemaware "interactive movies" that have been released so far, and send your entry to PHIL CAMPBELL, PO BOX 23 MACLEAN NSW 2463. The three winning entries will be drawn on April 10th, 1990 - so get cracking!



Battle Valley

AMIGA

FEELING IN A mercenary mood? Then here's just the game you're looking for. ***Steven Pike*** reports from the war-torn Battle Valley.

This game could be set in the not-too-distant present. The peace summit was unsuccessful, but an arms treaty was signed. All but two medium range missiles were destroyed, and wouldn't you know it? These, the last two medium range missiles in the world, have been captured by an obscure terrorist group. Oops! These guys plan to destroy the entire Western World unless their fellow terrorists are released from a United States prison. There are only two ways the world can be saved - one, the U.S. Government could release the prisoners, but we all know their stand on terrorism. The only other way is ... YOU!!

You are a mercenary and the U.S. Government has employed you to capture the terrorist bases in the desert outpost, *Battle Valley*, and destroy the missiles.

Your mission will begin at central HQ and you will progress from there to capture all terrorist bases. The two missiles are found in silos beyond the farthest bases and they must be destroyed. There is a timer counting down to zero, and in a nutshell, if the countdown ends, so do you, as the missiles are launched and the world destroyed.

You have at your disposal a tank and a helicopter. You will need to use both vehicles as some enemy weapons can only be eliminated by the tank. To further complicate matters, the helicopter is needed to repair bridges using its winch, so that the tank can infiltrate enemy lines and destroy the missiles. Using the helicopter's winch sounds easy, but care must be taken and a steady hand is required until you get the hang of it. I won't tell you the quick way to mastering the winch; I had no-one to coach me, and you won't get any coaching either (at least not from me).

You start the game with limited firepower, 50 shells for the tank, and 50 rockets for the helicopter, so gung-ho tactics are not recommended. However, there are ammunition dumps where your vehicles can stock up, so there is no need to be a total miser with your rockets. The shells last longer, but remember you must have enough shells when you reach the silos to destroy the missiles - it is a long trek back to H.Q.

The game is not only good to play, but also good to look at. It scrolls up-down as well as left-right, depending on your movements, and has a multi-layered background of the desert mountains. The vehicles are well-defined, even down to the wobbly aerials and camouflage paintwork. The enemy weapons are all easy to see, even if some of them are tricky to hit from the air. There are more than a dozen different enemy targets to line your sights on, some worth more points than others, depending on their importance to the terrorists. For example, an early warning station is worth more points than a land-air missile. Of course, they can be harder to blast, or even impossible to reach!

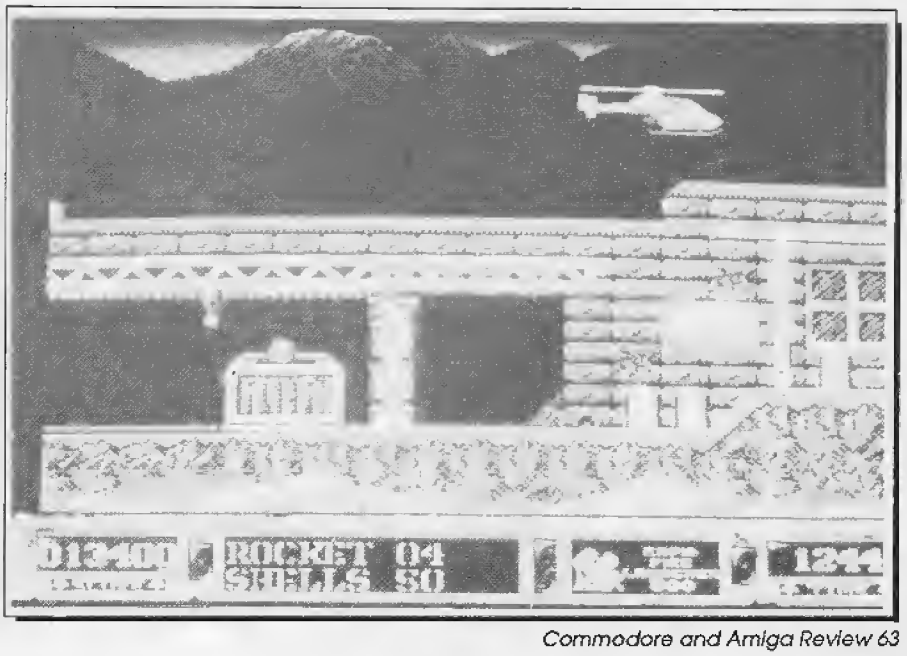
The game scrolls smoothly throughout, no matter what speed you are going or what craft is in use. The speed is adjustable from the keyboard, and can be changed at any stage of the game. If things get a bit hot, you can slow everything down for a while, or even press pause and wait for your second wind.

You can choose between soothing(?) music while you work, or hearing the enemy weapons blowing up, and maybe your own helicopter kissing the dirt. There are no new wizz-bang sounds, but you are shooting at the enemy in the desert, so how many different sounds can there be? The music is in stereo, and can be a pleasant change from the usual sounds of destruction.

The program leads into the game with pleasant-looking title screens, and an easy-to-use options screen. It also has other seemingly minor features, like a high score page, where you can save your name (which is important for us players that tend to mix our form). It has good graphics and sound, and although it is not necessarily easy to play, the game is easy to operate and manoeuvre.

I found *Battle Valley* enjoyable, and so will anyone interested in overcoming and destroying their enemies (in computer games only, of course!).

Review copy from Pactronics. RRP Amiga $49.95. ❑



West Phaser

by Luke Tattersall

WHO BETTER TO check out a hot new "cowboys and indians" game than Cool-Hand LUKE TATTERSALL? This game comes complete with a light gun, so there's plenty of action. What else do you need to know? Read on, as Luke reports on ... Westphaser.

Throw away your joysticks and pick up your pistol - *West Phaser* is in town. There you stand with your trusty *Phaser* at your side - the best friend a man could have in the Wild West.

Being Sheriff these days is no easy job. You need to pick your deputies carefully and always make sure you have enough ammunition. Who knows what lies ahead of you? It could be an ambush out on the prairie, a shoot-out in the main street, a gunfight in the saloon - what ever it is, you've got to be ready to shoot.

You and your deputies have the rather ugly task of trying to capture all the wanted criminals in the area and see that they are brought to justice. It's up to you to decide who you'll go after first. Obviously some will be harder to capture than others - but then they will also be worth more in reward money as well. You shouldn't have any trouble catching Big Nose and Apache Kid but when it comes to Billy the Kid you will have to draw on all your resources. To do your job properly you have to capture all six of the outlaws.

West Phaser is not your average shoot-em-up. In fact, it's more of a shoot-'em-down! The game comes with its very own gun (looks to me like a Smith & Weston .45) which plugs into the Modem port on the back of the computer. Bad luck if you've got an Amiga 1000 - it won't fit, as the modem port is configured differently.

The gun (or interactive light phaser) allows you to sit wherever you like in the room and shoot at the baddies as they appear on the screen. Simply calibrate your gun for the distance and the angle you will be shooting from. You can recalibrate the gun at any point in the game by pressing F5. This means that each player can have a seat in the room and stay in that seat for the duration of the game.

The gun is very accurate (that's not to say that I always was). Each shot shows up on the screen so you can easily correct your shooting. Obviously the further you are from the screen the harder it is (I rearranged my office so I could get a reasonable distance from the screen and give the varmints a sporting chance).

The game is in a cartoon style and many of the characters look like extras from an episode of *Quick-draw Mcgraw* or *Deputy Dog*. Some of them may look humorous but just about all of them try to shoot you. You need to be careful not to shoot the innocent by-standers who pop onto the screen every now and then. Before the criminal you are after comes on to the screen you have to shoot your way through a lot of baddies.

Keep an eye out for some of the little gimmicks they have put into the game (eg. try shooting at the girl in the saloon, or the light hanging from the roof, or the bank robber's horse, etc.).

You can have up to six players each round. You get to choose your six from a group of 10 (some of these are Wild Bill Hickock, Calamity Jane, Bat Masterson, etc). There are six criminals to capture which means six levels to the game. You don't have to catch them in any set order. As you capture each one you get to choose which one you will go for next. Between catching the criminals there's a sort of challenge stage where again you have to shoot all the baddies before they shoot you.

The game can be operated with the mouse - but why would you bother, unless you've got an Amiga 1000, of course! Most of the excitement in the game comes from actually holding and firing the gun.

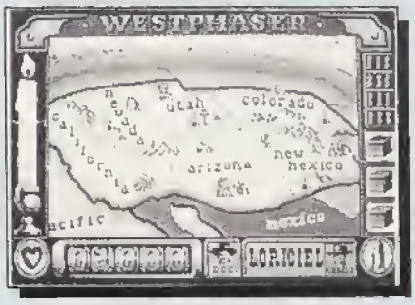
I thought *West Phaser* was first class. When I got the game I couldn't wait to play it. I was expecting BIG THINGS and it didn't let me down. It is pure shoot-em-up and relies on good reflexes and a good eye. Hopefully they will follow this up with other games that use the gun.

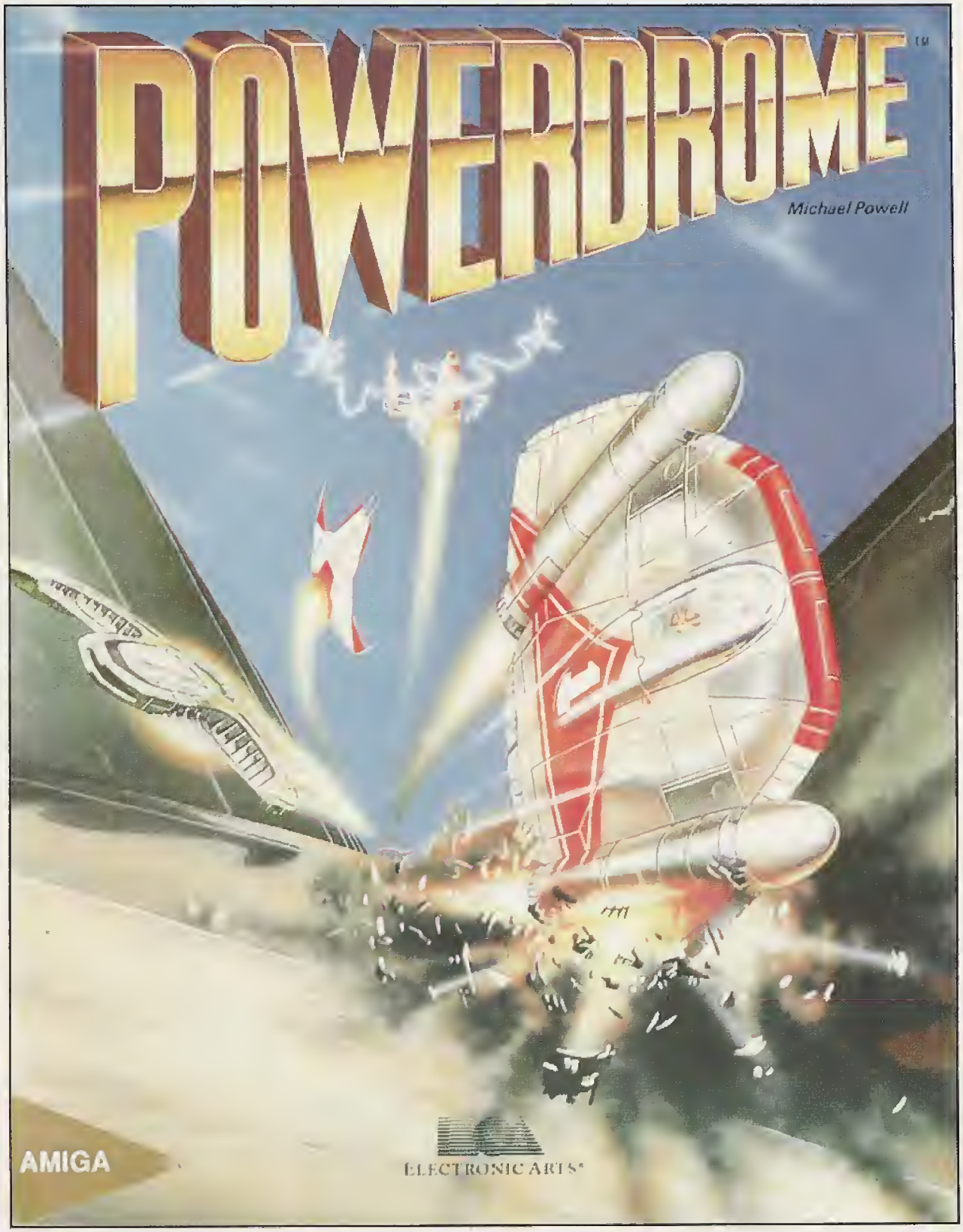
PGR?

● This sort of game may not suit everyone. If you think there's too much violence on TV and that it's all a bit too realistic then you may need to think twice before buying this game. True, they're only cartoon characters - but the fact is that this game differs from your run-of-the-mill space bug shoot-em-up in two significant ways.

First, *West Phaser* has you holding what looks like a real gun. Second, and most importantly, your job is shooting at people. I don't want to sound like a wet blanket. I thought it was a great game. But I'd think twice about buying it for younger kids. ❑

Amiga 500 and 2000 only. Review copy from Pactronics. RRP Amiga $89.95.





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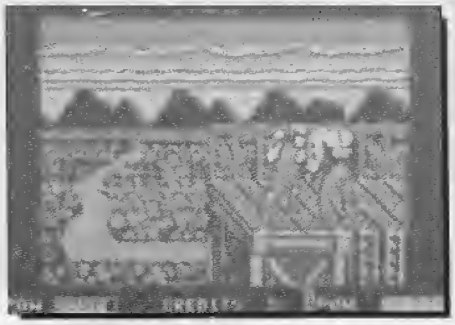
DOUBLE DRAGON II

PHIL CAMPBELL checks out the sequel to the arcade beat-'em-up that beat 'em all.

DOUBLE DRAGON WAS undisputably the arcade hit of the eighties - and every computerised kid on the block was waiting breathlessly for the home computer conversion.

As you probably remember, the Commodore 64 and Amiga versions came and went - it was about this time last year. There they were, Billy and Jimmy Lee, large as life, battling it out with unnumbered thugs on my Amiga. There was the beautifully detailed city-scape, with all the extra little bits and pieces that *Dragon* fans were anticipating.

Sadly though, *Double Dragon* didn't quite make the grade when it came to game-play. Moves were limited, the pace was just a fraction slow - for my money the game didn't quite match up to a lot of competing products.



Double Dragon II offers more of the same. The dreaded Black Warriors are back in action - the same ruthless gang that we fought off in the original. The first act of the re-constituted Warriors was to kidnap Billy's hapless girlfriend Marian and bump her off. What can Billy and Jimmy do except set out on a mission of revenge?

The guys start out from the city heliport. The action is hot right from the start, with groups of two or three bad guys attacking at a time. Background scenery is very detailed, with helicopters and buildings just like the arcade original.

Finish off the first attack and a mean looking lady with a motorcycle chain does her best to beat you to a pulp. Then there's a bunch about the size of a cricket team who set upon you all at once. Escape them and it's down a lift shaft, through a warehouse and out into the countryside to find the hidden Black Warrior base. In theory, anyhow. I'm stuck somewhere in an alleyway waiting for some urgent medical attention!

Spades, daggers, powerballs, boxes, chains, grenades and whips can all be put to good use. They seem to be lying around everywhere. I'm particularly fond of the chain - if you can't find one for yourself, try taking on the aforementioned mean looking lady. A few solid blows - self defence of course - and she'll drop hers on the ground.

All the bad guys are tough - but some are tougher than the rest. Some can only be described as huge, grotesque and mega-nasty. Words like "ugly" and "mean" don't even begin to do them justice. Full marks in the graphics department here - every detail is lovingly included. You can even see the studs on their leather jackets and the scars on their ugly faces.

Double Dragon II is potentially a great game. Graphics are good, sound effects are nice. The only problem is the gameplay. It's almost identical in feel to the original *Double Dragon*, which is a disappointment to say the least - a little sluggish, a little imprecise, a little bit "hit and miss".

Even so, there's plenty to keep you occupied. Master a few effective moves and you'll do quite well, and there's a whole city out there to explore. If you're keen to recapture the magic of the arcade experience you'll be well pleased - it's all here, except for that little edge missing from the gameplay.

The two player option makes all the difference. Play with a friend and you'll see a lot more of the game - you'll also have a lot more fun. After all, two head bangers are better than one.

Review copy from Mindscape. RRP Amiga $54.95, C64 $39.95. ❑

AMIGA

HERE IT IS, folks - the game you've all been waiting for. It's SPACE ACE, sequel to the amazing DRAGON'S LAIR. PHIL CAMPBELL reports that it's every bit as good as its predecessor - and every bit as bad, too ...

Just imagine for a moment that you could fill your water pistol with water from the fountain of youth. What a weapon! A liberal squirt on our leading politicians and the next election would be a non-event - after all, who would want a prime minister who was still in nappies? A quick splash and your meanest rivals become pimply faced teenagers with squeaky voices. Wow!

Wicked Commander Borf has got the same idea. He's modified it a bit, brought it up to date - now it's called the Infanto Ray. Borf has just kidnapped the beautiful Princess Kimberly, and he's plotting to take over the world by transforming his opponents into a bunch of giggling kids. You, my friend, are the only one who can save our helpless planet. You are *Space Ace*, and the fate of the earth is in your hands alone.

Space Ace is the follow-up to Don Bluth's blockbusting *Dragon's Lair*, a game that took the Amiga to new heights. *Space Ace* does it again - this time the graphics and sound are even better than before, scenes load from disk much more quickly, and there are many more challenges to overcome.

Graphics are genuinely cartoon quality. *Space Ace* started out in life as an arcade game based on a laser video disk machine. Don Bluth's cartoon studio produced the original animation, which was then recorded on laser disk - pushing the joystick in just the right direction at just the right time stepped the video disk to the appropriate scene.

The home computer version features exactly the same graphics as the arcade original, and there's not a laser disk machine in sight. There is simply a bundle of four floppy disks crammed full of compressed data, just waiting to be reconstructed and displayed on your screen. The process is fast, smooth, and incredibly effective. Characters that almost fill the screen move quickly and fluently - you could almost be watching the Saturday cartoons.

The sound-track is equally convincing. Digitised, of course, complete with orchestra, sound effects and even dialogue at strategic moments.

The game opens on a precarious cliff top. Kimberly and Ace watch as the huge blue figure of the wicked Borf flies toward them on an anti-grav platform. Borf draws his laser gun and fires. Kimberly screams, and plummets from the ledge. A quick thrust with the joystick sends the figure of Ace jumping to the left - Borf's laser turns the ledge behind him into a pile of rubble. Ace jumps back to the right, then ducks another blast - and on to scene two.

This time its a matter of ducking as a huge drilling device looms over your head - jump back, jump forward, jump forward, and you may find yourself still in one piece. Mistime a move, though, and you'll find yourself squashed at the bottom of a freshly drilled shaft. Not a pretty sight.

Space Ace is a very impressive game. There's only one problem. The fact is, you really have very little control of what actually happens. You don't really control the figure on the screen with your joystick, you simply make tactical decisions - the action is all pre-determined, and you simply choose the path that the game will take. There's only one correct set of movements that will take you right through the game - the challenge is to find them, more by trial and error than by skill.

When it's all said and done, *Space Ace* leaves me feeling acutely ambivalent and badly bifurcated. I don't know whether I love it or I hate it. On the one hand I love it - graphics and sound effects are second to none. But on the other hand, the only way I can get anywhere at all is to follow the cheat sheet that I obtained by devious means. Even then, I can only get to scene number 3. Maybe I'll press on, maybe I won't. Anyway, I've been turned into a kid by Borf's Infanto Ray. I think I'll just go and have a glass of milk and then settle down for a quiet game of marbles.

Review copy from Questor (02). RRP Amiga $89.95. ❑

POWERDROME

AMIGA

by Andrew Baartz

FAST TALKING Andrew Baartz straps on his racing helmet, climbs into his turbo-rocket powered Typhoon racer, and reaches for the throttle control as he files this exciting report.

Powerdrome is a bit like some of the Grand Prix racing games on the market. But only a bit. The difference is that motor racing is for wimps compared with the thrills and spills of a three-dimensional rocket powered "Typhoon" race in the twenty-first century Powerdrome Championship.

Powerdrome gives you the chance to enter the lightning fast world of a Typhoon pilot competing in Powerdrome XXIV against four of the galaxy's meanest and most determined pilots to win the coveted Cyberneufe trophy.

A *Powerdrome* race season consists of a series of six races. All but one of these races are held on different planets, thus giving a wide range of atmospheric compositions, gravitational pulls and weather conditions in addition to the challenge of completing a single lap of tortuous, tortile track.

As the race begins your Typhoon racer is nestled in what looks like a trench. Racing though these trenches requires incredible dexterity, walls appearing before you as you approach corners and tunnels that arch and loop, rise and fall. Hitting the walls damages the racer, impeding performance. There are shields that can be finely adjusted, but they seem to create some degree of friction against the surfaces from which you are being protected.

There is the option of either mouse or joystick control. However, you quickly learn that the sensitivity of the mouse is crucial. Another way in which to achieve the manoeuvrability and sensitivity you desire is via the Typhoon Tune-up option, giving you access to the various modifications you can make to your racer. This is the key to successfully winning races in Powerdrome.

There are six types of adjustment that can be made; the sensitivity of the aerofoil, the efficiency of the speed brake, the roll/pitch bias, the fuel type, the intake filter type and altering the number of laps in a race.

A Powerdrome race normally lasts for between 20 and 50 laps or between 40 and 180 kilometres depending on which track you are racing. The filters fit over the engine intakes to protect them against the effects of differing planetary atmospheres. The correct filter optimises engine efficiency in a given environment, while a mistake brings reduced power, engine failure and even can destroy an engine, or two.

Various fuels have qualities that trade-off greater thrust against rapid use. This affects how often you must return to the Robopits. Brakes can be adjusted to suit the demands of each circuit. One adjusts the pitch/roll bias in conjunction with the aerofoil sensitivity control to tailor the handling response (the rate of pitch, roll and yaw movement) to one's taste.

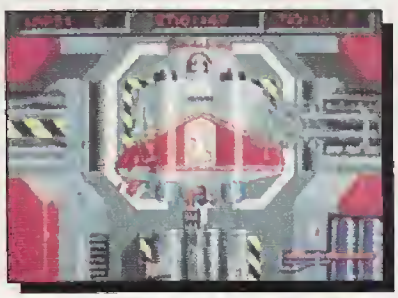
You can have as many practisce laps as you wish (to refine your craft's performance) before the qualifying laps. With the starting positions decided racing can begin. Start the engines and activate those afterburners. It pays to be conservative with the use of the afterburner, since they generate enormous amounts of heat and can easily melt an engine. Damage to the wings can render the Typhoon unstable. However, most components can be replaced in the Robopits - the robot administered pit crew - if you have the skill to pilot it back. The nose cone of the craft contains the electronics. Too much front damage will leave you hurtling around with no instruments. You don't realise how important they were until you've lost them.

Competition is fierce. There is a "datalink" option so that you can play against someone on another machine, if you have a modem cable handy. It takes a little practice to compete in the Powerdrome Championship successfully, but it's worth persevering!

Once the Typhoon is tuned to perfection racing is as natural as walking.

The speed and excitement are wild. As you race you're always thinking back to the decisions that you've made earlier - the right fuel, the right adjustment, the right filters?? The answers become obvious, even as you think: Strategies paying off as opponents fall by the wayside. Always pushing the engine temperature to the limit, with shield strength as low as possible and with the risk of disaster ever present as you propel yourself through the maze of trenches and tunnels. The sheer concentration makes victory so very sweet! I highly recommend it!

Review copy from ECP (075) 96 3488. RRP Amiga $45.95. ❑



TED BEAR'S RAINY DAY GAMES

by Tony Smith

WHAT DO YOU do with the kids when it rains? Stick a lump of play-doh in their hands and sit 'em in front of the telly? How about something a bit more constructive? *Tony Smith* reports on *Rainy Day Games*, a new collection of educational games for the Commodore 64.

In my experience with educational software, I have found it hard to interest children in spelling games and maths programs when there are so many good arcade games available. One mathematics package caused some interest until it went back to the beginning after every mistake. Repetition is fine, but there are limits to young people's patience and these limits are quickly reached. Attempts have been made to turn the learning process into a game with the Funschool series and this has met with some success.

Rainy Day Games is the first package I have seen which manages to cater for a wide range of ages with enough action to keep even young children occupied for a while.

Basically, it is a suite of three card games, Concentration, Go Fish and Old Maid, with options for up to four players and three levels. Two helpful animated creatures, Ted Bear and Mr Monkey are animated sprites whose acceptance of losing and lack of favouritism set a good example to the players, encouraging them to 'stick to it and do better.'

All games are menu driven and can be tailored to the players, individual needs via the options menu, which can then be saved to disk, allowing any child familiar with the computer to boot it up and start off unassisted. Designed so that children with even no reading skills can operate it, the options allow up to genius level and have up to 25 pairs of cards available in Concentration.

Everybody knows how to play Concentration so I will only list the options, three different packs of cards are offered, seven pairs, 15 and 25 pairs are available with three levels of intelligence, beginner, average and genius. Ted Bear never forgets at genius level but at beginner level he is decidedly absent minded, even if some of his expressions are quite funny when he bumps into the edge of the playing area.

Old Maid is the traditional game with the object being to leave your opponent holding the old maid. I played this several times to test the computer's integrity and it did not cheat once, unlike some of the adult games which seem to know which card you are holding.

The final game is Go Fish, which is a pair matching game, the winner being the player holding the most pairs. Mr Monkey turns your selected card and shows it to Ted Bear, if he has a match in his hand, it's yours, if not, he tells you to 'Go Fish.' Mr Monkey then selects a card from the pack, if it is a match for one of yours, you win a point, if not it joins your hand. These pick ups often match Ted Bears cards, but the winner is the one with the highest score.

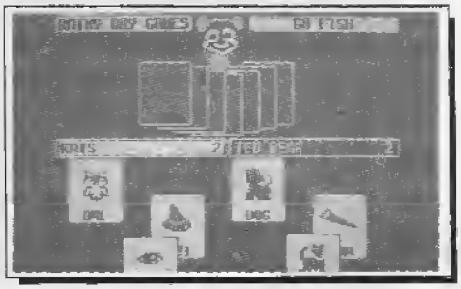
I enjoyed playing *Rainy Day Games*, Ted Bear is a good loser and Mr Monkey never puts him down, the sprites are simple and well animated, responding easily to either joystick or keys.

Sound leaves a lot to be desired, a few notes here and there, although IBM users have had the same sort of sounds for years. *Rainy Day Games* offers a lot for kids, the most important feature to me was the attitude of the program, with fair play and good sportsmanship being the order of the day.

This is no fantastic animated arcade game and does not pretend to be, it is an educational package and even if it only teaches players an honest fair game then it is working. Fortunately it teaches more than that, it improves memory and observation skills along with the joys of winning and losing by the luck of the draw which is what all card games are based on.

Rainy Day Games comes recommended as a fine educational package suitable for kids of all ages including the biggest kids of all, the parents.

Distributed by *Pactronics*. RRP C64 $19.95. ❑



Ken Simpson nods off to investigate a surrealistic somnambulist's delight - whatever that means! Read on as Ken encounters some very ...

BEEP BEEP BEEP BEEP goes through my head and the green gowns crane over me as I begin to fall fall fall into the abyss that waits to take me into its it warm white arms as I tumble head over heel into the enfolding whiteness that is waiting and I lose myself as the glare becomes blinding then I land with a bump in what can only be described as a washing machine and as I wait pink sticky blobs come out and attach themselves to me and then a large stick enters and starts to rotate and I manage to jump out of the way time and time again as the stick picks up more and more of this pink sticky stuff and then I move just a fraction too late and I watch as my head gently and elegantly explodes in front of me ....

Have you ever had the experience of falling just as you hover between sleep and wakefulness? Usually just as you are going to sleep. Well that's what it's like playing *Weird Dreams* from Rainbird. Mind you, I could have told you it was going to be a little like that from the 64 page novella that comes with the game. It outlines the lead-up to the predicament you now find yourself in.

Basically, a certain demon named Zelloripus (can you believe that Douglas Adams?) who inhabits a rather attractive female body named Emily has taken a particular dislike to you in the midst of her boredom with her exile on earth. Despite being forbidden to interfere with humans at all she decides to kill you by destroying your mind through horrifying dreams.

You, of course, seek medical aid, and when the Medics do an NMR scan (Nuclear Magnetic Resonance for all you untrendoids) they find some very strange changes to your brain. This leads them to need to operate on you to be sure ... and then just as you go under Emily/ Zelloripus is sprung by "The Guardians" and she disappears into your brain and ... need I say more.

This is the intro to a fairly standard graphic adventure game plot - a sort of "solve the puzzle to stay alive" kind of thing. But that's about the only standard thing I can say about the game.

From the opening fall into the bright white tunnel (remember all those near-death stories that made the TV a few years ago?) to the very classy dither dissolves between scenes, and the near perfect animation, I can say little except that the graphics are very impressive. Scrolling between screens is very good if a little slow, and the sound is excellent. Obviously lots of digitised or very carefully engineered sound has gone into this.

The gameplay is also well up to standard. The movements are context sensitive as well as reasonably sensitive to either joystick or keyboard. But beyond this, I think the game really starts to excel. The puzzles are difficult. One friend who is usually very good couldn't get out of the first frame!

The problem is usually very simple to see but not so easy to solve. How do you get out of a giant fairy floss machine (yes - not a washing machine) with no doors, ladders or windows - and if the stick hits you your head explodes! (See below for hint). And when that is dealt with how do you defeat the giant bee? or the man-eating plants? or the jumping "kangalumps" that head butt you to death, just to name a few. Sadly, there is no save game feature - if you bomb out, you simply have to start again. Very frustrating.

Just to keep you from getting cocky at this stage, let me tell you that reading the novella is well worthwhile, if for no other reason than it is quite an interesting (if unfinished) little book. It sets you up well for the game and gives you a valuable insight into the author's mind which is, I think, a strange mix of Douglas Adams, Isaac Asimov and C.S. Lewis. But in the end it doesn't have substantial hints. It doesn't even suggest that you try jumping in the opening sequence! Oops. Now I've let the cat out of the bag!

The documentation is short and to the point - all that you'll need to get started. In fact, if you can't figure out all you need to know from the booklet, then you probably shouldn't be playing this game!

Of course there is the obligatory copy protection - wait ... I can hear a rhythmic thumping ... Oh no, the "Kangalumps" have found me ... now where's my fish?❑

Review copy from Questor (02) 662 7944.

RRP Amiga $59.95. ❑

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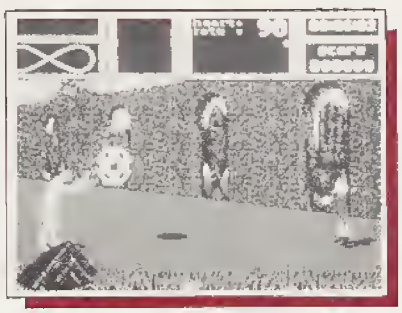

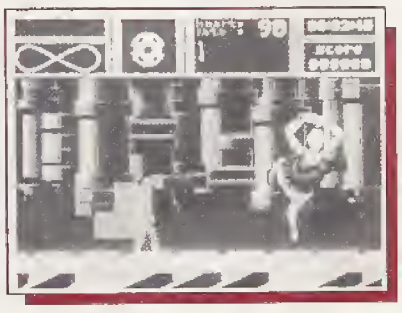

Astérix
OPERATION GETAFIX

Greg Munro didn't read Asterix comics in the Sunday funnies when he was a kid. They went right over his head. Is it too late for him to get educated? Maybe this game will help ...

REMEMBER ASTERIX THE Gaul? That strange little man with flapping feathers on his helmet and boots three sizes too big, who goes round beating up Roman soldiers? I tackled Asterix comics when I was a kid, but quickly gave up on them because of their incomprehensible storylines. Perhaps if I'd persevered I might have understood what's going on in *Asterix - Operation Getafix*. It's the Amiga version in English, from the French computer game based on the film of the comic book!

There are things I don't understand because I don't read Asterix comics.

There are other things made obscure by poor translation, both in the instruction booklet and on screen. But all of this only adds to the mystique, because *Asterix* is an animated adventure quest game, where you must use your little Gaulish brain to save the village from the Romans and Prolix the soothsayer.

Getafix makes the potion that gives the Gauls superhuman strength to defeat the Romans. But Getafix has been accidentally conked on the head by Obelix and is no longer in his right mind. Getafix is the only one who can make a potion to cure himself, but he can't remember the ingredients. Asterix must find ingredients, in the village, the woods, and even the Roman camp; and by trial and error, mix the potion to cure Getafix.

Asterix engages in different types of action as he moves from scene to scene. The scenes scroll horizontally, and he walks in front of, behind and into objects such as trees and rocks.

He can BUY items in the Gaulish village for later use, which cost an amount of sesterces. Items, sesterces, and ingredients carried are shown at the bottom of the screen. Interaction with shopkeepers, such as Fulliautomatix the Blacksmith, is shown in writing at the bottom of the screen, next to the face of the person talking.

Asterix may also PLAY DICE against the evil soothsayer or the Romans, in a bid to gain more sesterces. These are thrown with the mouse.

You can also FIGHT the Romans. Asterix loves to distract them by pointing into the air, causing them to grunt and look upwards. Works every time - Roman soldiers apparently have the IQ of a wombat. Incomprehensibly, a lone Roman in the woods will fight Asterix, but if he meets a whole patrol, they will always run away, causing Obelix to say something unintelligible which probably made sense in French. Oh well, *c'est le guerre, et c'est le game*.

When his energy is running low, Asterix can go WILD-BOAR HUNTING for lunch. His energy level is gauged at the bottom of the screen in wild boar legs (which look more like chook drumsticks!). When the last leg disappears, he decides the quest is too hard and gives up (Yes folks, this is a nobody-ever- gets-killed game!).

AMIGA

Boar hunting is made harder by the fish thrown at him for no apparent reason from off-screen. These bonk him on the head, causing rapid energy loss. Is this some esoteric piece of Asterix lore that I would know if I'd read the comic or seen the film? Why are fish flying through the forests of Ancient Gaul with no visible means of support?

Finally, when he has gathered some ingredients, Asterix can go to Getafix and SELECT THE INGREDIENTS to make a potion. He then decides whether to test it on a captive Roman, or on Getafix. If Getafix takes too many wrong potions, his condition will deteriorate. I haven't yet discovered how to capture a Roman, so I've only been able to try out a potion on Getafix. It didn't work.

Grafix and musix in *Asterix* are very good. The animated credits, and the arrival of Prolix in the village, are excellent. The game itself should provide hours of puzzling. A choice of keyboard or joystick is available throughout the game. The joystick commands work well. Current game position may be saved, which is a big plus. Copy protection is by pass-number, so you can backup your disk.

This game is compulsory for all Asterix fans! Go out and buy it, and then tell me how the heck you enter the Roman camp!

Review copy from Pactronics (02) 748 4700.

RRP Amiga $49.95. ❑

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NAVY MOVES

Robert Lang signs up for a little stint in the Navy, and finds that it's not all beer and skittles! Check out his report on Navy Moves ...

FANS OF *ARMY MOVES* unite! *Navy Moves* has arrived, sporting more gameplay and fantastic graphics. Adequate sound backs up what is one heck of a hardie, which comes in two parts on one disk.

Setting the scene, the background sound effects to the effective title screen really get the old sea legs wobbling! Progress is indicated by a great little detailed map which is reproduced on the instruction sheet so you can have a hope of knowing what's up ahead as you weave your way through treacherous waters.

Have you ever had a game that has been so darn hard and yet so darn addictive? One of those games where you just have to keep playing because you want to get right through the wretched thing ? *Navy Moves* is a classic example of one such game.

Many a time was the cry "If I don't get anywhere this time, out goes this game !", but isn't it incredible how every time you say that defiantly you get that little bit further. All your blood needs is a sample of what lies ahead and you're pounding your way back through the lower levels to meet the challenge.

Navy Moves part one is a scrolling game requiring skill and precision timing of the old stick, a few headache tablets and a hanky ready to wipe sweat from the brow. The game starts with you riding in your "Higgins PT Motorboat". Your first objective is to jump your way through a minefield, until you pass two buoys where it's time to tackle the enemy commandos with your speargun. The choppy sea provides incredible distraction to your gaze which is supposed to somehow alternate from your boat to the mines you are jumping, in unbelievable "Moonbuggy" style.

Unfair! is the cry when you realize that the enemy commandos are riding "Aquatic GPX Suzukis". These neat little machines provide sufficient headaches to last an hour or two until you dive off into the big blue to tackle Tiger Sharks and swim yet further to meet and octopus and a sea monster! Never mind any disadvantages, because at later stages you handle neat little toys like the Bathyscaphe, a little submersible of your own, and the "Flammenwerfer Flamethrower"!

The final challenge in stage 1 is to get inside the nuclear submarine which is your ultimate target. Once you get in, you are given the password required to begin part two, and it's time to plant explosives on the reactor. The aim, of course, is to blow the submarine clear outta the water.

The second part is fast-action stuff! You run around the submarine, which is nastily in itself a maze, killing various soldiers and officers on board, and using their passes to access the on-board computer to eventually locate the reactor. Place a bomb there, and then get out, and mission accomplished! Speed and graphics can be compared to *Green Beret* perhaps, but it's not all horizontal in this one, it's up, down, and all-around.

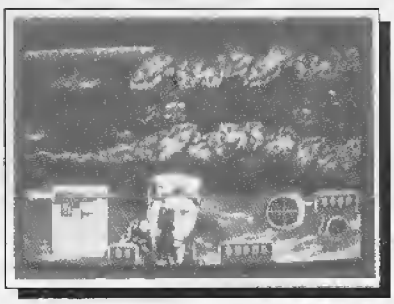
Now, if you're all thinking "Oh, what a fast-paced review, couldn't he go over it all a little slower ?", well the answer is NO! The game itself is fast-paced, and so the review reflects the atmosphere of the game in that if you sneeze, wink, or generally goof-up, then it's back to the drawingboard.

Graphics are a great improvement on the old *Army Moves*, and in fact are rather arcadish quality. Sound and music suit the feel of the game well, if not enhancing the feel in some areas. Gameplay is to the max - I can't tell you how hard the second part is because I can't play far without the access code, and I can't complete the first part to get it!

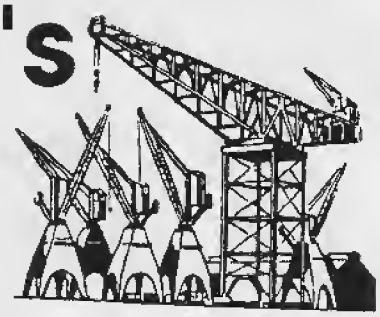
If you thought life as an Army Mover was tough, then life as a Navy Mover will add blisters to the hands as they push and pull the joystick for all it's worth. *Navy Moves* is darn hard, but all in all it's a top class game. This beauty is worth its weight in pearls!

Review copy from Mindscape (02) 899 2277.

RRP Amiga $39.95, C64 disk, $29.95 cassette $19.95. ❑



Adventurer's Realm



by Michael Spiteri

Hello and welcome to AC&AR's adventure section - dedicated to all adventurers on all Commodore computers (yes, even Vic-20's and C-64s!!) If you are stuck in an adventure game, can offer help in an adventure game, or if you would like to get something adventurous off your chest then write to one of the following addresses:

● For adventure games and all hint sheets:
Adventurer's Realm 1/10 Rhoden Court North Dandenong Vic 3175

● For wargames:
Barry Bolitho 1/10 Rhoden Court North Dandenong Vic 3175

● For role-playing games (Bards Tale, Ultima, etc):
The Dungeon (Kamikaze Andy)
44 Hawkesbury Drive Willeton WA 6155

● Always enclose a S.A.E when writing to the Realm.

Free hint sheets

The following hint sheets are free of charge! Select up to four hint sheets, and make sure you enclose an s.a.e to hold the hint sheets you want. New hint sheet! FISH by Colin Russell (Frenchs Forest, NSW)

- **Bards Tale 1,2,3**
- **Zork 1,2,3**
- **Hitchhikers Guide**
- **Hampstead**
- **Hobbit**
- **Castle of Terror**
- **NeverEndingStory1**
- **Adventureland**
- **BorrowedTime**
- **The Pawn**
- **Pirate Adventure**
- **Deja Vu**
- **Dracula 1,2,3**
- **Faery Tale**

(thanks to all who sent in their copies!)

New Releases - New Releases - New Releases

● QUESTOR HAS A whole heap of new strategy games that are due for release this month. Titles include *Draken* (Ubisoft), a thrilling adventure-strategy game, *Creature*, as well as *Dragons Lair II*. Questor are also working on distributing two Microprose thrillers - *Tower of Babel* and *Midwinter*.

Infogrames, makers of the living comic book *Passengers on the Wind* (for the Amiga) have released another graphic story adventure called *The Quest for the Time Bird*. The game is basically a living story with you using the mouse to decide the destinies of the major characters! Your decision will determine how the story unfolds. Featuring artistic storybook graphics and superb background music, it is as much fun to read as it is to play. Available from Questor (watch out for a full review soon).

There seems to be a sudden craze in adventure games towards sleep (and what happens during that time!). First there was the chilling *Personal Nightmare*, then the very weird *Dream Zone* (see review), and now the even more weird *Weird Dreams*, the new arcade-adventure from Rainbird software, available for the Amiga from Questor.

From one nightmare to another.....

Dream Zone

● by Baudville from Pactronics

● For the Amiga

● WHAT WOULD YOU do if you woke up, walked to your bedroom door, opened it, and instead of seeing you're hallway you are faced with a multicoloured path leading into the galaxy?

You would be dreaming, of course. You soon realise that pinching yourself doesn't do any good - and the door locks behind you. Well, you are in a real stew now, aren't you? However, if you have the forethought to have pinched your brother,s water pistol and kept your toothbrush, you should have enough stuff to get you a bit further into this dream (or nightmare, I'll leave that decision up to you!).

Thus, we enter *Dream Zone*! Following the path you come to a flashy door with a familiar looking keyhole (maybe it has teeth!). This door leads the way to a weird city that you'll have lots of fun exploring.

But what's the aim of the game, I hear you ask"? Well, there's this beasty creature who keeps prancing around your

dreams making you wake up all hot and sweaty. You have to kill this dude before he kills you (then you'll have no trouble sleeping!). What this crazy city has to do with all this has got me beat, but who said dreams made sense?

Many weird and wonderful characters reside in *Dream Zone*. You'll meet Nick the Rat, Gajunk the Freak, and Elvis, the rock'n'roll lizard. Getting an I.D. card to enter the Rigor Mortis Bar (come in and get stiff, promises a sign) means running around a maze of public servants (a very nasty but clever one, to say the least!).

When you do get in you'll come across a barmaid with a shapely rear (sic), twins chewing gum, and a bartender with an empty keg! If you are smart enough to travel further you'll meet Nick's cousin John, and even have a look at a carnival. You'll find yourself getting married, flying in airships, and pleasing crowds (which I haven't worked out how to do ... yet!)

Lot's of tricky problems in *Dream Zone*, a game with a sense of humour aimed at the late teens market, and I suppose if you can talk teen you'll be able to work out the very frustrating parser.

It accepts full sentences - some of the time, other times it can be downright painful. For example, there is a crowd of people. I type in: talk to crowd. The game replies 'you can only to talk to people'. I enter: look at crowd. The game replies 'they look back. The girl looks familiar...' I enter: talk to girl. The game replies 'you can only talk to people' Aaaaarggghhhhh!

Yes - communicating with people can be a problem at times, however this game does have a lot going for it. Good graphics and animation, with some fairly good sound, many places to visit and many characters to meet. You can enter a majority of the commands via the mouse by pointing to the graphic picture and other icons. You can have your inventory displayed on the screen, and have the text colour co-ordinated to help you along. One minus is that the graphics load each time you enter and re-enter a room, and there is no option to turn them off - a little irritating.

Dream Zone had me up past midnight, and it has become one of my favourites purely because it is a fun game to play. The problems are interesting and varied and fun to solve. Good documentation with some help to get you started included. If you liked *Tass Time in Tonetown* then you'll like *Dream Zone*. Worth losing sleep for!!

- **Rating: 85%**
- **Verdict: Great fun!** ❑

Problems, Problems, and more Problems

(Or the demented adventurers department)

● HELP IS NEEDED soon for the following adventurers who have got themselves hopelessly stuck in such awful situations.

David Lear is stuck in three games at the moment. First up is *Dungeon Adventure*. A jelly is hassling him, and lack of light is too. Then, in *Kobyashi Naru*, David is stick in all three parts....

- **Wisdom Game:** Cannot recover solance from clam? Cannot reach vines.
- **Knowledge Game:** Cannot avoid or kill the Kradod.
- **Understanding Game:** Cannot defeat the Laserdroid.

Finally, in *Red Moon*, David needs to know how to open the safe and also wants to know how to make contact with the newtling and the sage.

Barbara Scott of Julia Creek in Qld has stumbled across a Sphinx in *Zak McKracken*, and has just had an overwhelming desire to draw on its leg with a yellow crayon. But what does she draw?

Kim Brown of Henley Beach in S.A. is having difficulties, in fact, one huge problem, in *Mars Saga*. How does she gain access to the city of Procenium?

Meaghan Russell of Yerong Creek in NSW is stuck in the ever mysterious *Book of the Dead*. She cannot find what to fire from the mangonel, or find strength to move the boulder, or find a method of worshipping in the temple. Also, what does the ibis carry in its beak?

Shelley DuVal is currently stuck in *Blacksilver*. She cannot seem to find the Kings Staff (which, she gathers, can only be in the Island Retreat). Any takers?

Walter Brank is stuck in *The Pawn*, having tried everything in the Realm's hint sheet, he is still unable to cross the Red Line. Then in *Maniac Mansion*, he needs to know how to open the safe, operate the chainsaw, and fix the staircase (and so does Brendan Lewis of Springvale Sth in Vic).

Craig Blackberry is stuck in *Guild of Thieves*: How do you catch fish in the moat? ❑

The Dungeon

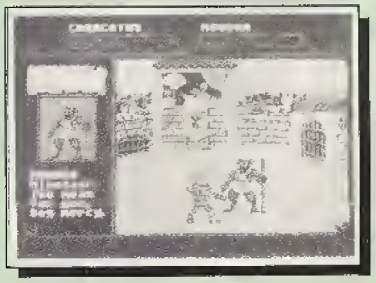
(Adventurers Realms Role-Playing Dept) by Kamikaze Andy

Hillsfar

- **Distributed by ECP**
- **Commodore 64/128, Amiga**

● *HILLSFAR* IS YET another SSI product in its Advanced Dungeons and Dragons line, released in it's C64 version over a year ago as a supplement to the increasingly successful *Pool of Radiance*. *Hillsfar* is more of an arcade adventure than a RPG, but it does accept the characters created in *Pool of Radiance*. What qualifies *Hillsfar* as an entry into the role-playing arena is the structure of solving subquests to raise the attributes of the characters in your party. There are individual quests for thieves, fighters, mages, and clerics.

The arcade sequences play a major part in solving those quests. For example, fighters have to do a lot of fighting in the arena (as do other classes, incidentally) and must also excel in archery. At the beginning of the game, all classes must undergo a horseriding sequence which does test one's joystick dexterity. When characters enter a house in a city, they must quickly move about in a gauntlet type maze, looking for chests and finding an exit within a given time limit.



Thieves must pick locks by figuring out whether a certain pick would open a jammed tumbler. There are many more different arcade sections in the game, and each poses a different challenge for the game player.

Hillsfar's graphics and animation, to be brief, are excellent for a C64. Smooth scrolling and clear defined characters make this game a high rater in the graphics stakes. The recently released Amiga version also features nice graphics, but contains a rather droning soundtrack. The gameplay is evident in both versions, though.

For those of you who played *Pools of Radiance*, *Hillsfar* is a must. The quests provided in the game should keep most occupied for weeks.

- **Kazscore:70%**
- **Verdict: Good stuff!** ❑

Help, Help, and More Help
(or the smart adventurers dept)

● ADVENTURERS ALL OVER Australia have been in a generous mood over the last couple of months, and this month in the Realm I'm going to print all the wonderful contributions sent it. If you were stuck in a game a few months back, then there is a good chance you'll be set free here!

● **Game:** *Bards Tale I*
● **For:** George Williams
● **From:** Craig Blackberry & Bill Horsley
● **Help:** To enter Mangars Tower you must have the onyx key, which Kyleara gives to you. The enterence to the Tower i in the lowest (3rd) level of the sewers, 16 north and 17 east.

● **Game:** *Sorcerer*
● **For:** Alex Harvey
● **From:** Kamikaze Andy
● **Help:** To open the trunk you must examine the diary of Belboz to discover a code word (usually the name of a monster). Once you have found the code word, look up the monster in the manual of the game to discover the combination to the trunk.

● **Game:** *Shadowgate*
● **For:** Risole
● **From:** Bill Horsley
● **Help:** Put the holy water on the hell hound to get the horn.

● **Game:** *Shadowgate*
● **For:** Barbie Hitchemore
● **From:** Bill Horsley
● **Help:** The key to the door behind the mirror is in the hand of the skeleton.

● **Game:** *Kings Quest III*
● **For:** Lesley Robinson
● **From:** Bill Horsley
● **Help:** Grab the cat at the Wizard's home. Get hair.

● **Game:** *Deja Vu*
● **For:** Stuart Johnson
● **From:** Bill Horsley
● **Help:** Drop the gun into a whirlpool in the sewer.

● **Game:** *Lurking Horror*
● **For:** Wayne Annette
● **From:** Bill Horsley
● **Help:** Get hand, dip it in the vat for a short time, then show it to Urchin.

● **Game:** *Ultima IV*
● **For:** Stinger

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● **From:** Mark Healy
● **Help:** Candle of Love can be found in township of Cove. Find the secret passage in the chamber of the ANKH

● **Game:** *Ultima IV*
● **For:** Bradley Wenman
● **From:** Mark Healy
● **Help:** The altar rooms in level 8 can be found by peering at a gem and searching each different room.

Meanwhile, Kamikaze Andy offers all this help:
● **Game:** *Spellbreaker*
● **For:** Michael Lee
● **Help:** Give lava fragment to the hungry rock, and you will be able to ride him.

● **Game:** *Beyond Zork*
● **For:** S.K.Pilley
● **Help:** The onion has nothing to do with the idol puzzle. You must push the onion up the lighthouse.

● **Game:** *Legend of the Sword*
● **For:** Ken Cras
● **Help:** To cross the river, use the underground passage. Look up at the bats for the password.

● **Game:** *King Solomon's Mine*
● **For:** R.S. Warren
● **From:** Stuart George (Springvale, Vic)
● **Help:** To cross desert, dig, take what you find, n,n,n, dig, take what you find, drop shovel, s,s,w,w,w.

● **Game:** *Bastow Manor*
● **For:** Nick Van Heeswyk
● **From:** Bev Deegan (The Beaver)
● **Help:** Old man Bastow puts the brass key in the mailbox.

● **Game:** *Fish*
● **For:** Mark Healy
● **From:** The Beaver
● **Help:** 1) Put gargoyle into hole.
2) Open door and go south to get out of the secondary control room.
3) Get the bird out of the cage at the mine before it blows up!!

● **Game:** *Arazok's Tomb*
● **For:** Many!
● **From:** Wally
● **Help:** To get past the snake, wave the wand. However, you must approach the snake from the room below.

● **Game:** *Emerald Isle*
● **For:** Val Brackett
● **From:** Grandpa Robie
● **Help:** Cave-in: Use the post near the mine to prop up the ceiling. Light required. To get to North Platform Forest Station, you need a small ornate key to start the tower clock, then the city folk will give you the key to the city. Use this key to open all doors (including station).
Tip: Use the silver ticket to buy a Season Rail ticket.

● **Game:** *Shadow of Mordor*
● **For:** Rene De Candia
● **From:** Noel
● **Help:** Use branch to pole raft.

● **Game:** *Mask of the Sun*
● **For:** Rene
● **From:** Noel
● **Help:** Type shhot (or should that be "shot"?) as soon as the snake appears.

● **Game:** *Hollywood Hijinx*
● **For:** Dot the Granny
● **From:** Noel
● **Help:** Use skis to go down stairs. Swim underwater from grotto (down, down) then up to bomb shelter. Use chain to open hatch and plank to hurl yourself through hatch. ❑

The Questor Adventurer of the Month

● The guys and gals at Questor have kindly donated a game to the Realm to be given free to the Realm's Adventurer of the Month. So many people deserve to win this month, but unfortunately we can oly have one winner, and that person is Tony Dillon of Calwell in ACT, who donated a compedium of hints and maps for many an adventure. Runner up is seasoned adventurer Suzanne Parkes, who donated a disk containing many, many hints and tips. Also worth a mention is Colin Russell, who sent in a hint sheet for *Fish*.

Well, I've run out of room, and there are still hints, tips and problems to be printed, so watch out for next month's Adventurer's Realm (which will also include the complete list of clever contacts!!) Have fun. ❑

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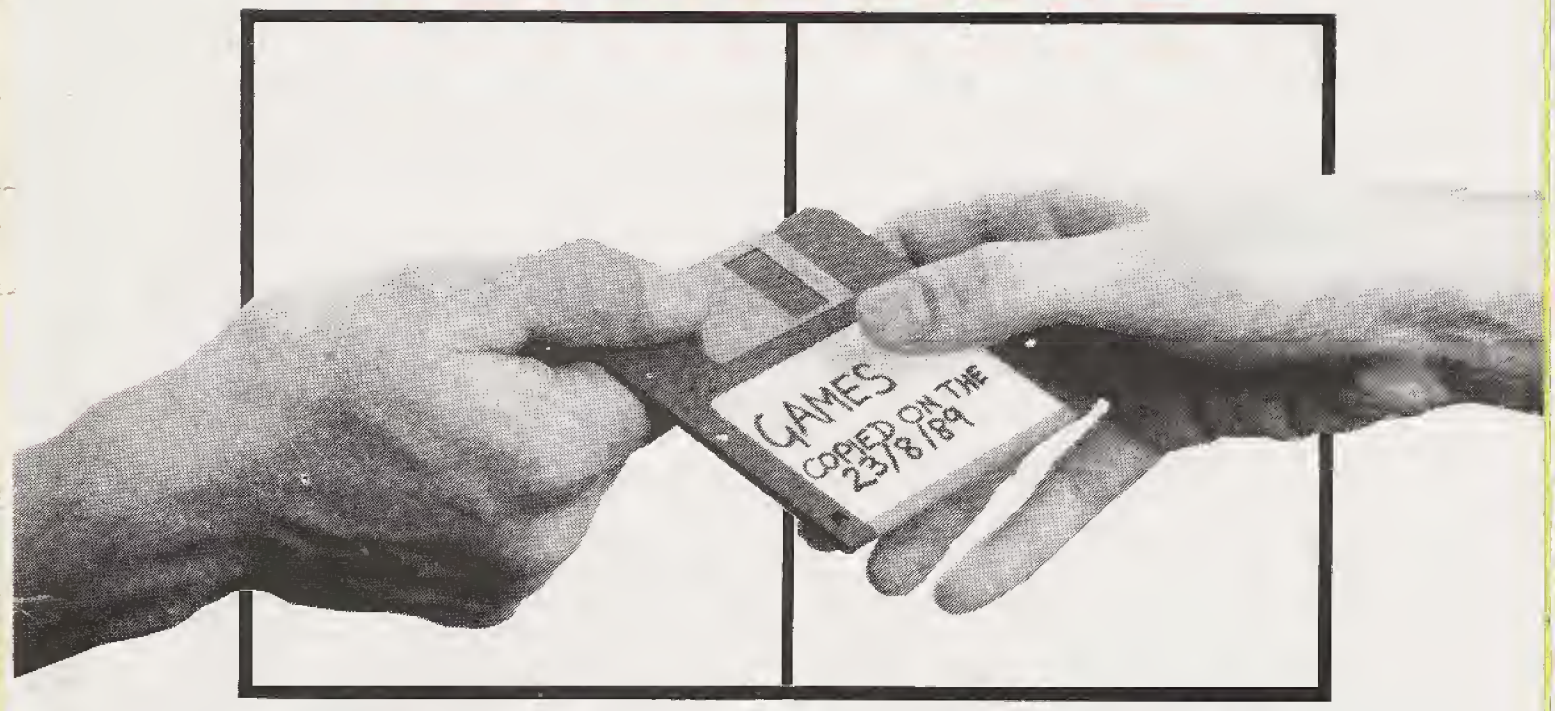

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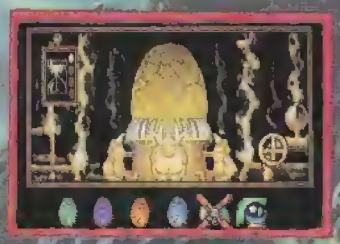

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